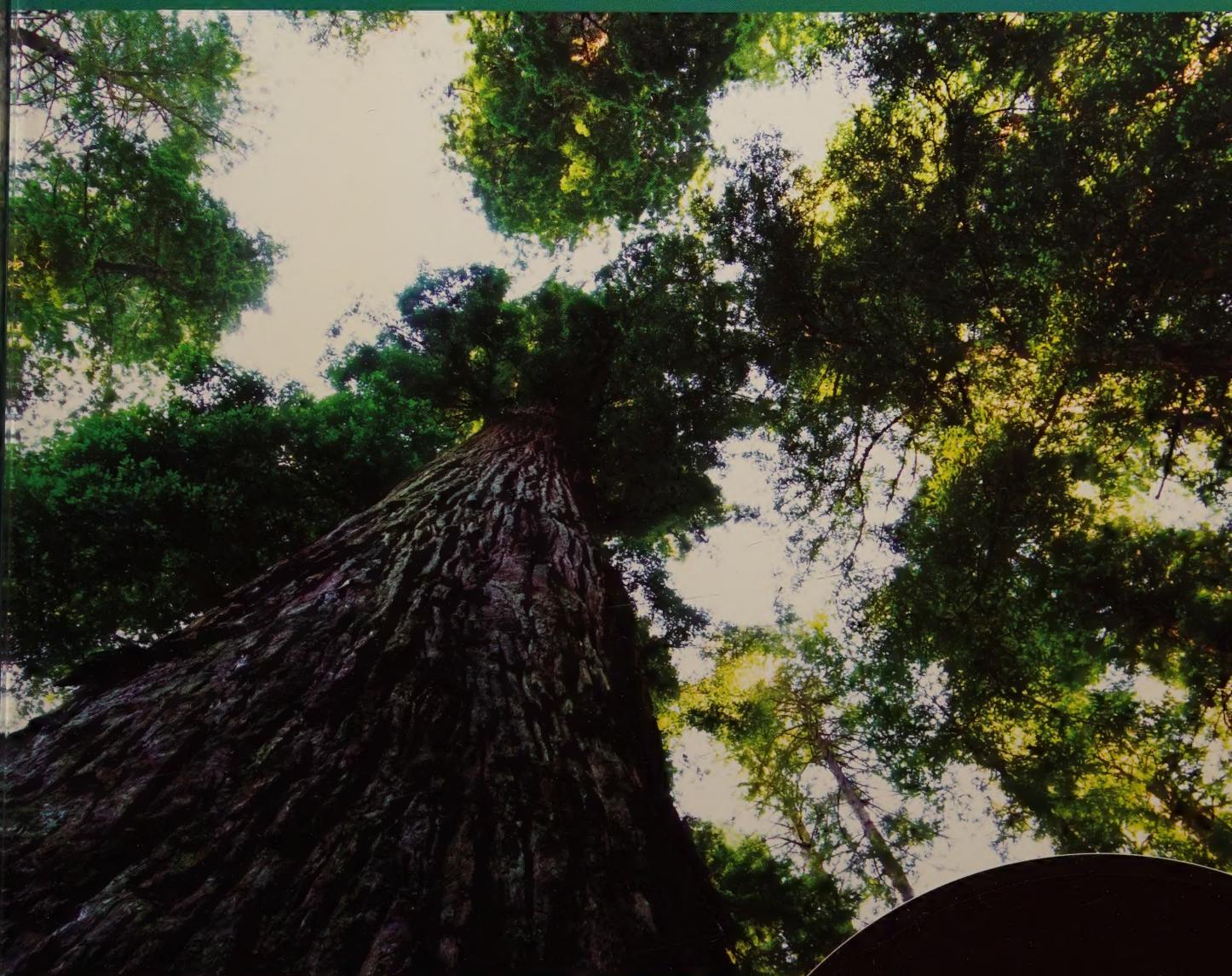


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EARTH CONSCIOUSNESS

co-Christology

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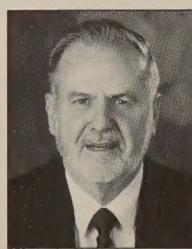
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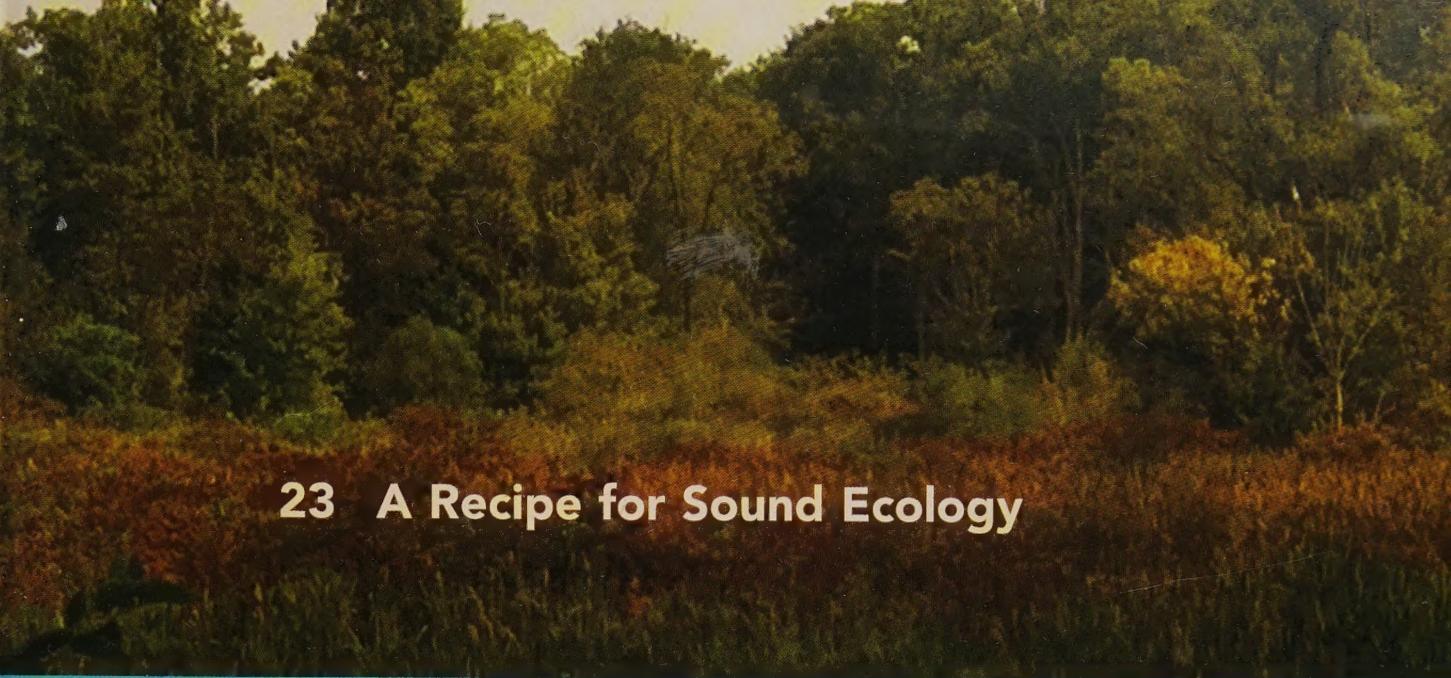
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Editor's Page

Four Forms of Earth Consciousness

Today we are more conscious than ever of the earth on which we live. Prolonged droughts, powerful hurricanes and raging wildfires have made debates about climate change superfluous as broad changes in weather patterns affect millions around the globe with untold costs in human suffering. On a variety of fronts, from energy to transportation to architecture a new consciousness of the earth is changing the ordinary ways we live our lives.

This new awareness arises out of the both the scientific evidence and the practical realities of everyday life. But it has psychological and spiritual roots as well. If there was a single moment when this new psycho-spiritual awareness began, it was perhaps with the release of the first photograph of the earth taken from space on December 7, 1972 by the crew of Apollo 17, five hours into their journey to the moon. The astronauts described the earth as a "blue marble." It quickly became one of the most widely distributed photographs ever taken. To many at the time, the image represented earth's beauty, but also its vulnerability.

Now, forty years later, our consciousness of the earth continues to develop and find new expression. What are the forms that this consciousness takes?

The Biblical Perspective

The Judeo-Christian tradition has always had a deep appreciation of creation. In the accounts of Genesis, the poetry of the Psalms, and the hymns of Ephesians and Colossians the earth has been recognized as a reflection of its Creator and humankind seen as its steward. Reflecting on how stewardship had devolved into exploitation, Pope John Paul II wrote near the end of his life, "It is necessary, therefore, to stimulate and sustain the 'ecological conversion' which over these last decades has made humanity more sensitive when facing the catastrophe toward which it was moving" (Audience, January 17, 2001). Pope Benedict took up this theme from the very beginning of his papacy. During the homily at the Mass for the inauguration of his papacy he said,

The external deserts of the world are growing because the internal deserts have become so vast. Therefore, the earth's treasures no longer serve to build God's garden for all to live in, but they have been made to serve the powers of exploitation and destruction (April 24, 2005).

Within this framework of biblical theology, earth consciousness has grown from a stance of praise and care for the earth to a prophetic awareness and call for conversion and justice.

New Awareness of Indigenous Spiritualities

In the face of this environmental degradation, many in the developed world have begun to explore and appreciate the perspectives of ancient peoples on the natural world. Among the features of this consciousness are an awareness of the sacred dimension and power of the natural world, a more integrated awareness of the interaction between the spirit world and the human world, and a sense of human beings not so much as rulers of the earth but as part of a community of life among all creatures. One Native American prayer is a good example of this worldview:

Honor the sacred.
Honor the Earth, our Mother.
Honor the Elders.

Honor all with whom we share the Earth:
Four-leggeds, two-leggeds,
winged ones,
Swimmers, crawlers,
plant and rock people.
Walk in balance and beauty.



The Gaia Hypothesis

Another form of earth consciousness on the rise is expressed well by the Gaia hypothesis. It proposes that the earth with all of its living creatures and physical components forms a single, complex, and self-regulating system. When first proposed by the chemist James Lovelock and microbiologist Lynn Margulis in the 1970s it was met with skepticism and even hostility from some in the scientific community. But today it has gained broad acceptance and is studied in many scientific disciplines.

The psycho-spiritual impact of the Gaia hypothesis has been to increase consciousness of the unity of life on earth and the inter-connectivity of organic and inorganic life. As communication has become instantaneous and travel around the globe relatively easy, technology has heightened the awareness of the earth as one community, as a small planet in an expanding universe.

The New Story of Creation

Theologian Thomas Berry and cosmologist Brian Swimme have proposed the New Story of Creation. Inspired by the work of Jesuit paleontologist and theologian Pierre Teilhard de Chardin, they have integrated the scientific findings of the universe's evolution from the big bang to life on earth today with a christo-centric perspective. Berry concluded his essay "On the New Story" this way:

If the dynamics of the universe from the beginning shaped the course of the heavens, lighted the sun and formed the Earth, if this same dynamism brought forth the continents and seas and atmosphere, if it awakened life in the primordial cell and then brought into being the unnumbered variety of living beings, and finally brought us into being and guided us safely through the turbulent centuries, there is reason to believe that this same guiding process is precisely what has awakened in us our present understanding of ourselves and our relation to this stupendous process. (*The Dream of the Earth*, 1988)

These four models—the Judeo-Christian appreciation of creation as God's gift, the sacred awareness of indigenous tribal peoples, the Gaia hypothesis, and the New Story have all shaped the earth consciousness of people today. In this issue of **HUMAN DEVELOPMENT** we invite you to explore these and other forms of earth consciousness as well as the ways people are putting it into practice in their lives and communities.

Robert M. Hamma

Robert M. Hamma

Reference

Thomas Berry, *The Dream of the Earth* (San Francisco: Sierra Club Books, 1988) 137.



Ilia Delio, O.S.F.

ECO-CHRISTOLOGY: Living in Creation as the Body of Christ

Ecology is the study of the relationships between living organisms and their interactions with their natural or developed environment. The root *eco* comes from the Greek word *oikos* which means house. Ecology is the study of nature's household. All creatures live within some kind of ecosystem and relate or influence each other and their environment by their behavior. The scientific study of biological systems in the early twentieth century led to the discovery of open systems and the continual flux of matter and energy from the environment. The interrelatedness of the earth exists within a larger interrelatedness in the cosmos marked by a dynamic process of evolution. Evolution is a movement from simple to more complex life forms; at critical points in the evolutionary process, qualitative differences emerge.

We humans live on a small planet in a mid-size galaxy occupied by many different planets. Our universe, as we know it today, is about 13.7 billion years old, with a future of billions of years before us. According to the Big Bang model, the universe developed from an extremely dense and hot state. Space itself has been subsequently expanding, carrying galaxies (and all other matter) with it; the universe is dynamic. Created out of stardust, algae and other natural ancestors, we humans are evolution come to consciousness.

Knowing the universe story helps us human beings identify and orient ourselves in relation to the earth. Thomas Berry called this wider environmental identity and passion the "Great Work" of awakening or turning to the earth with an active presence of relatedness. E.O. Wilson spoke of a deep ecological identification between human persons and earth, an emotional need for deep and intimate association with nature. Humans are part of the earth community and both humans and earth are manifestations of the emergent universe story; nature is critical to human meaning and fulfillment.

By 2050 the Arctic Ocean could be ice free in summer and more than one million species worldwide could be driven to extinction. How did we arrive at this point of ecological crisis?

The word “ecology” became popular in the 1960s when we began to recognize that we live on a planet of finite resources. Rachel Carson’s book *Silent Spring* helped launch the environmental movement, as she described the toxic environmental impact of pesticides on the fundamental inter-relatedness of life. The word “crisis” began to be linked to the environment. A crisis is a rapidly deteriorating situation that, if left unattended, will lead to disaster in the near future. Today we can identify three main areas of crises: an overstressed planet, excess energy consumption and global warming. Scientists indicate that changes in global climactic systems and collapsing global biological diversity pose fundamental threats to the very future of human society. Natural resources are diminishing; global warming is causing species loss, increased flooding and hurricanes; energy sources are diminishing and the earth’s capacity for a sustainable future looks bleak. In a world where forty percent of the people live on less than two dollars per day and social development is stalling or backsliding, environmental disruption looms ominously (Warner 2003, 55).

In 1990, a group of distinguished scientists, including the late Carl Sagan and physicist Freeman Dyson, wrote a letter appealing to the world’s spiritual leaders to join the scientific community in protecting and conserving an endangered global ecosystem. They wrote that we are close to committing “crimes against creation.” We are on the brink of humanitarian and ecological catastrophes, and the risks they pose are not arrayed equitably. If global warming continues deaths from global warming will double in just 25 years to 300,000 people per year. Global sea levels could rise by more than 20 feet with the loss of shelf ice in Greenland and Antarctica, devastating coastal areas worldwide. Heat waves will be more frequent and more intense. Droughts and wildfires will occur more often. By 2050 the Arctic Ocean could be ice free in summer and more than one million species worldwide could be driven to extinction. How did we arrive at this point of ecological crisis?

In his controversial article “The Historical Roots of Our Ecologic Crisis” historian Lynn White said that the source of our environmental problems is religious in nature. Christianity, he claimed, with its emphasis on human salvation and dominion over nature, made it possible to exploit nature in a mood of indifference to the feelings of natural objects. White pointed to Genesis 1:28 where God gave Adam dominion over creatures. This call to dominion set humans apart from the earth and gave rise to an unhealthy anthropocentrism whereby all but humans became excluded from grace. Christianity developed an ambivalent attitude toward creation, extolling the fecundity of creation on one hand and striving to transcend creation on the other. The influence of Neoplatonism on Christianity contributed to an attitude of other-worldliness. Neoplatonism was a hierarchical way of viewing God and the world and continued into the Middle Ages through the writings of Augustine and Pseudo-Dionysius, among others. The Neoplatonic ladder of ascent was a movement away from earth, rising above natural, sensible things as if they were inferior and in some sense, not truly real (Kinsella 2002, 66). Neoplatonists turned quickly from the material world and its individual creatures to scale the metaphysical ladder to the spiritual and divine realms by means of universal concepts.



The orientation toward other-worldliness became more pronounced after the Reformation. Pointed toward heaven and away from earth, Christians became preoccupied with sin and guilt and focused on personal salvation. The earth became a stage or background to the human story and not part of God's plan for salvation. White argued that no religion had been more anthropocentric than Christianity and none more rigid in excluding all but humans from divine grace and in denying any moral obligation to lower species. We will continue to have an ecological crisis, White said, until we reject the Christian axiom that nature has no reason for existence except to serve us.

White's thesis strikes to the core. He claims that the roots of our ecological troubles are largely religious and the remedy must be religious as well. Is the ecological crisis essentially a religious crisis? If so, should we expect that neither political, economic nor socio-cultural changes will produce a sustainable future without a vibrant religious core at the heart of ecology? That is, is there no other way to reverse the downward slope of environmental changes without a fundamental change in our religious being and orientation?

A FRANCISCAN VIEW OF CREATION

The role of religion in relation to ecology may not seem like an obvious one but religion, like ecology, is about relatedness. The word "religion" comes from the Latin *ligare* which means to connect; it is also the root of the word "ligament." To whom or to what are we connected? Although this question calls for a more comprehensive explanation than what can be provided here, still it is worthwhile recalling the function of religion, particularly Christianity, up to the late Middle Ages, before the rise of modern science. Essentially religion served to integrate and connect the human person to God, neighbor and creation. Although Neoplatonism shaped Christianity into a world-transcending religion, the central doctrine of incarnation—Word made flesh—kept it grounded in creation. Whereas some spiritual writers like

Benedict and Augustine emphasized the risen Christ, others like Francis of Assisi and Ignatius of Loyola stressed the humanity of Christ, disclosing the immanence of God and the sacredness of creation.

White highlights the biocentrism of Francis of Assisi and not without reason. Francis had a powerful experience of God while praying before an icon of the crucified Christ. This experience opened him up to the reality of God's presence in the human person and in nature. Once revolted by the sight of lepers, Francis came to experience the sweetness of God in the kiss of the leper. Revelation was not an abstract idea for him but the movement of God to the poverty and humility of creaturely life. Growing in love with a God of outpouring love, Francis was led into solidarity with all creation as brother. Through his love of Christ crucified he came to see that nothing exists autonomously and independently; rather all things are related to each other because everything is created through the divine Word. All creation spoke to Francis of God and thus creation became the place for him to encounter God. To use a modern analogy, creation was God's "facebook." In beautiful things, Bonaventure wrote, Francis saw divine Beauty itself and from each and every thing he climbed up to embrace his Beloved.

The Franciscan theologian Duns Scotus formulated several important ideas that illuminate Francis's experience of God in nature. The first idea is that God and creation are not two different orders of being (divine and created); rather God and creation belong to the same order of being without confusion of natures, since God is divine, uncreated being and nature is finite, contingent being. God, however, does not exist outside the relational ordering of being, as if only the effects were ordered and the cause lay outside the relationship. Rather, the essential order of being is a unified whole, including God. Every aspect of creation is part of this unified whole revealing the rationality, freedom and creativity of God (Ingham 2002, 39-42). Each created thing in its own way tells us something about God, and God's being shines from within created being.



The second idea is related to the first. God is love and the reason for all divine activity is grounded in the infinite love of God. The Trinity is a communion of love out of which the gift of creation flows freely. In light of modern science, we can say the divine love that spilled over into evolving life was the Word incarnate long before Jesus of Nazareth appeared in history. Creation exudes the love of God.

While Scotus did not deny the reality of sin, he did not believe that sin is the reason for the Incarnation. Christ did not come because of sin but because God is love. From all eternity God wanted to express Godself outwardly in a creature who would be a masterpiece and love God perfectly in return. Christ is first in God's intention to love and hence to create. Whether or not sin ever existed Christ would have come, ordained out of the fullness of God's love; the whole creation is made for Christ. The intrinsic connection between the mystery of creation and the mystery of Incarnation, revealed in Jesus Christ, imparts meaning not only to humanity but to the entire universe. This doctrine of the primacy of Christ relates to Scotus's third insight on individuation.

Since love is the reason for Christ, everything is created out of divine love and expresses divine love by its own unique being. The doctrine of creation and the doctrine of incarnation are not two separate events but one and the same act of God's self-giving love. Scotus's doctrine of individuation (*haecceitas*) refers to that positive dimension of every concrete and contingent being which identifies it and makes it worthy of attention. Individuation sets things off from other things like it to which it might be compared. This doctrine was influential on the Jesuit poet, Gerard Manley Hopkins. What Hopkins grasped,

through Scotus, is that every aspect of creation—a grain of sand, a shooting star, a maple leaf—by being/doing itself, directly and immediately does God, who is incarnate, Christ. In this respect, the smallest things of creation for example, a leaf or a grain of sand, become charged with divine meaning (Short 1995, 30). Such a view of nature leads to a poetry in which things are not specific symbols, but all mean one and the same thing: the beauty of Christ in whom they are created. Hopkins' indwelling Christ is captured in his poem *As Kingfishers Catch Fire*:

As kingfishers catch fire, dragonflies draw flame;...
Each mortal thing does one thing and the same:
Deals out that being indoors each one dwells;
Selves—goes itself; myself it speaks and spells,
Crying What I do is me: for that I came.
I say more: the just man justices;
Keeps graces: that keeps all his goings graces;
Acts in God's eye what in God's eye he is—
Christ—for Christ plays in ten thousand places,
Lovely in limbs, and lovely in eyes not his
To the Father through the features of men's faces.

Scotus's theology of creation is one in which grace and nature intertwine. Nothing in creation is accidental or excessive; nothing is worthless or trivial. Each and every thing, no matter how small or seemingly insignificant, is of infinite value because it images God in its own unique being. We humans are called to observe closely, attentively and carefully the details of biological diversity and the many forms of life on our planet.

Things are God-like in their specificity which is why regular, daily attention to the wider world of creatures/nature is fundamental. The world is charged with the grandeur of God and we are called to see deeply into the reality of things. Without such attention we lose contact with Christ in his most widely extended body of creation.

TEILHARD DE CHARDIN AND CHRISTOGENESIS

It is not surprising that the Jesuit paleontologist Pierre Teilhard de Chardin was attracted to Scotus's doctrine of the primacy of Christ. When he discovered his teaching through the Sicilian Franciscan, Father Allegra, he claimed "Voila! La theologie de l'avenir!" (There is the theology of the future!). Teilhard de Chardin, like Scotus, not only perceived Christ at the heart of the universe but at the heart of the material universe. As he exclaimed in his book, *The Divine Milieu*, through the Incarnation "there is nothing here that is profane for those who know how to see" (Teilhard de Chardin 1960, 66). By this he meant that Christ physically and literally fills the universe. He is immersed in space and the unfolding of time of our human existence. Teilhard de Chardin, like Scotus, saw an intrinsic relation between Christ and the physical universe; Christ belongs to the very structure of the cosmos and comes to explicit expression in the person of Jesus. He understood the science of evolution as the explanation for the physical world and viewed Christian life within the context of evolution. Evolution, he claimed, is ultimately a progression toward consciousness; the material world contains within it a dynamism toward spirit. From the beginning, life prefers increased life. The process of evolution is a spiritualization of matter and the evolution of mind. Teilhard de Chardin did not view mind apart from matter; mind is the withinness of matter from the beginning of evolution. The human person is integrally part of evolution in that we rise from the process, but in reflecting on the process we stand apart from it. Following Julian Huxley, Teilhard de Chardin wrote that the human person "is nothing else than evolution become conscious of itself" (Teilhard de Chardin 1959, 221).

Although Teilhard's embrace of evolution proved difficult for the Church, he realized that without accepting evolution as the precondition for all knowledge, theology would become sterile, an abstract discourse on speculative ideas. Teilhard de Chardin saw the problem with Christianity as one of increasing irrelevance. We do not live in a fixed framework upon which we simply project the image of Christ to admire or worship. Christ is not an intrusion into an otherwise evolutionary universe, nor is belief in Jesus Christ a therapeutic remedy for sin. Rather, Christ is the core of evolution itself.

Regarding Christianity's looming irrelevance, Teilhard de Chardin's basic complaint rested on an outmoded Christology formulated many centuries ago: "Our Christology is still expressed in exactly the same terms as those which three centuries ago, could satisfy men whose outlook on the cosmos it is now physically impossible for us to accept. . . . What we now have to do without delay is to modify the position occupied by the central core of Christianity—and this precisely in order that it may not lose its illuminative value" (Teilhard de Chardin 1971, 76–77). Thus he sought to integrate Christianity and

The human person is integrally part of evolution in that we rise from the process, but in reflecting on the process we stand apart from it.

evolution in order to show that Christianity is a religion of evolution. The unfolding universe is the coming of Christ—not from without but from within.

Teilhard de Chardin did not think that evolution is a blind or random process but one with direction, oriented toward Christ Omega. He recognized that there is a unifying influence in the whole evolutionary process, a centrating factor that holds the entire process together and moves it forward toward greater complexity and unity. The process of evolution from the view of the physical sciences may be one of cosmogenesis and biogenesis, but from the point of view of Christian faith it is “Christogenesis,” a “coming-to-be” of Christ. His faith led him to posit Christ as the “centrating principle,” the “pleroma” and “Omega point,” where the individual and collective adventure of humanity finds its end and fulfillment. Through his penetrating view of the universe, he found Christ present in the entire cosmos, from the least particle of matter to the convergent human community.

The whole cosmos is incarnational. Like Scotus, he believed the world is like a crystal lamp illuminated from within by the light of Christ. For those who can see, Christ shines in this diaphanous universe, through the cosmos and in matter. Christ invests himself organically with all of creation, immersing himself in things, in the heart of matter and thus unifying the world (Teilhard de Chardin 1959, 293–294). Everything is physically “christified,” gathered up by the incarnate Word as nourishment that assimilates, transforms, and divinizes. The body of Christ—Word incarnate—is the whole evolutionary sweep of cosmic history recapitulated in the person of Jesus and sacramentalized in the eucharistic bread and wine. Teilhard wrote that “the effect of the priestly act extends beyond the consecrated host to the cosmos itself... the entire realm of matter is slowly but irresistibly affected by this great consecration” (Teilhard de Chardin 1961). Christ’s transforming activity must move from the church’s altar to the altar of the material universe.

Teilhard de Chardin’s Christogenic universe invites us to broaden our understanding of Christ, not to abandon what we profess or proclaim in word and practice, but to allow these beliefs to open us up to a world of evolution of which we are vital members. He urged Christians to participate in the process of Christogenesis, to risk, get involved, aim toward union with others, for the entire creation is waiting to give birth to God’s promise—the fullness of love (Romans 8:19–20). We are not only to recognize evolution but make it continue in ourselves. The evolution of Christ’s body continues in us. Teilhard de Chardin opposed a static Christianity that isolates its followers instead of merging them with the mass, imposing on them a burden of observances and obligations and causing them to lose interest in the common task. The role of the Christian, he claimed, is to “christify” the world through actions, by immersing ourselves in the world, plunging our hands into the soil of the earth and touching the roots of life. Before, he said, the Christian thought that s/he could attain God only by abandoning everything. Because of evolution, however, we now discover that we cannot be saved except through the universe and as a continuation of the universe. We must make our way to heaven *through* earth. What we have to do, he said, “is not simply to forward a human task but bring Christ to

completion . . . to cultivate the world. The world is still being created and it is Christ who is reaching his fulfillment through it” (Teilhard de Chardin 1971, 49). We are to harness the energies of love for the forward movement of evolution toward Christ Omega.

THE CHALLENGE OF TECHNOLOGY

Teilhard de Chardin’s evolutionary Christianity has not yet taken root as a way of life. In thought and practice, we still cling to a medieval cosmos and medieval theology. Our religious attention continues to be focused away from earth toward another place we call heaven. We do not yet have a sense of belonging to the earth. Religion no longer serves a centrating function as it did in the Middle Ages, in part because Christianity has yet to embrace modern science, especially evolution as the basis of all reality. We do not have a seamless narrative to guide our lives; rather we have a mélange of scientific, cultural and religious stories. The lack of a religious centrating principle has caused us to be inward focused and other-worldly centered. We have no real vision of the inherent goodness of creation and its sacramental character.

Additionally, technology is creating a new extended self in cyberspace that is spawning a postbiological consciousness. Cell phones, ipods, tvs, dvds, all turn our attention away from the earth towards artificial mediums that promise to quickly satisfy our deepest wants and desires. We are more comfortable with machines than with people, finding ourselves related not by flesh but by digital information. Born and bred in a postmodern milieu, modern technology has reshaped our daily existence in ways that can make it difficult to experience the grace of God in our lives. We are becoming cybergnostics—mind over matter, software rather than hardware. The identification of nature with technology leaves the natural world stripped of its sacred character. Our attention to virtual other-worldliness, including avatars and second lives, has produced a nature deficit in some people and undergirds a strong anti-incarnational bias in our culture. From an ecological perspective, the body of Christ continues to be crucified.

ARE WE AT HOME IN THE COSMOS?

Christian responsibility for the natural world demands that we think of the earth, and the entire cosmos for that matter, as our *home*. Teilhard de Chardin spent long periods of time in the deserts of China and Africa as he explored the origins of humankind. Only if we spend time with nature will we be impelled to act on behalf of nature. But this type of penetrating vision requires time to deepen. A technological mindset does not comprehend that the “dead time” of which modern technology tries to rid us is often the arena of grace. Kathleen Norris observed that “it always seems that just when daily life seems most unbearable . . . [it is then] that what had seemed ‘dead time’ was actually a period of gestation” (Norris 1998, 10). In our feverish obsession to fill our lives with more things that give us what we want, instantly, without effort or engagement, do we cut ourselves off from the graced dimension of ordinary life?

Feeling at home in creation involves attentiveness to ordinary things as mediations of grace and occasions of divine blessings. We need focal practices, communal gatherings and cyber fasts that disengage us from artificial environments and direct us to the goodness and beauty of creation. Francis of Assisi spent long periods praying in solitary places, developing inner soul space and interior freedom that enabled him to relate to all creatures as a brother. Our current age promises immediacy and expediency in artificial environments, cut off from the natural world. How can we slow down, discover our essential relatedness, be patient and compassionate towards all living creatures and realize that it is a shared planet with finite resources? We must strive to unite—in all aspects of our lives—with one another and with the creatures of the earth. Such union calls us out of isolated existences into community, to be attentive to the cry of the earth and the cry of the poor, to recognize the face of Christ in our midst.

Teilhard de Chardin said that God evolves the universe and brings it to its completion through the instrumentality of human beings. We go forward, however, not by finding God in the world but seeing God *through* creation, a “diaphany” of God shining through the transparent world. Thus it is important how we awaken to a new consciousness of Christ’s universal presence in our own lives, which is discovered in one’s own self-realization and full maturity in “being-with-Christ.” To be fully human, Teilhard de Chardin wrote, we must get away from what is “merely human” and return to the wilderness. He calls us to leave the cities and find the unexplored wilderness by returning to matter, to find ourselves where the soul is most deep and where matter is most dense; to feel the *plenitude* of our powers of action and adoration effortlessly ordered within our deepest selves (Teilhard de Chardin 1960, 115).

Centuries before Teilhard de Chardin, the Franciscan theologian Bonaventure wrote, “you exist more truly where you love than where you merely live, since you are transformed into the likeness of whatever you love, through the power of this love itself” (Hayes 1999, 140). Both the Franciscan and the Jesuit realized that love is the source and goal of the universe. We are to love so as to evolve into greater wholeness, to deepen our humanity by uniting with one another and with earth’s creatures. In Teilhard de Chardin’s view, love alone can evolve this cosmos toward the fullness of Christ. However, if we fail to perceive our human vocation to build the earth—to adore the living Christ—then we will bear its revolt, as Bonaventure wrote:

Therefore any person who is not illumined by such great splendor in created things is blind. Anyone who is not awakened by such great outcries is deaf. Anyone who is not led by such effects to give praise to God is mute. Anyone who does not turn to the First Principle as a result of such signs is a fool. Therefore open your eyes; alert your spiritual ears; unlock your lips, and apply your heart so that in all creatures you may see, hear, praise, love, adore, magnify, and honor your God, lest the entire world rise up against you (Bonaventure 2002, 61).

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*Eco*psychology

Mary Elizabeth Kenel, Ph.D.



Traditional psychology took as its subject the biographical me and located this me within the human person defined by the boundaries of physical skin and immediate behavior. With the rise of postmodernism in the 1970s, however, this view was challenged. Jungian-trained analyst and author James Hillman, known as the father of archetypal psychology, noted we could not accurately set borders to

human identity since it trails off from the light of focused awareness into the shadows of the unconscious. He contended that whatever a person might claim to be has at least a portion of its roots beyond agency and awareness and is implicated in the wider world of nature. Noting the danger of isolation and the unreality that eventually follows upon self-enclosure, Hillman warned of an excessive narrowing of the field of psychology and urged psychologists, in

particular psychotherapists, to entertain fresh ideas. In his view, such ideas were blowing in from the world, the ecological psyche (soul), to which the human psyche was turning with fresh interest. Citing his worry over the natural environment, he attempted to motivate all psychologists dedicated to awakening human consciousness to wake themselves up to one of the ancient truths: we cannot be studied or cured apart from the planet.

ECOPSYCHOLOGY: DEFINITIONS AND GOALS

As a result of the efforts of Hillman and others who shared a similar vision, the field of ecopsychology, dedicated to the integration of insights and knowledge from the fields of ecology and psychology, emerged in order to address interrelated areas of concern.

Ecopsychology, as defined by Andy Fisher, a leader in the field, is an area of psychological theory and practice that places all psychological and spiritual matters within the context of our membership in the natural world. Its efforts are aimed at building a society where the relationship between humans and nature is one of respect and reciprocity rather than domination and control.

Recognizing that there exist deep bonds and reciprocal relationships between nature in its myriad non-human forms and us, a primary goal of ecopsychology is to dispel the illusion of separateness that leads to suffering for the environment and for humans as well. It seeks to foster recognition and realization of the connections between the human and non-human creation in the web of life, drawing for example, on themes such as nature as our home and family, i.e., Earth is our mother, animals are our non-human siblings. By nurturing psycho-emotional bonding with our world, and indeed with the whole of creation, ecopsychology hopes to invite us to environmental action and sustainable lifestyles based on love and appreciation rather than imposed in light of anxiety, fear or blame.

A second major goal of ecopsychology is the broadening of our self-identification to include the non-human world, or as some phrase it, the greater-than-human world. This aspect of ecopsychology contributes to an understanding of the natural world in the context of a spiritual path and suggests practices appropriate to growth in a creation-based spirituality. While not all ecopsychologists are inclined to agree, John Davis of Naropa University is a strong proponent of this point of view.

Transpersonal psychology, exemplified by the writings of Ken Wilber (volume one of *Sex, Evolution, and Spirit* is a prime source), focuses on the inter-

face of psychology and spirituality while noting that nature is an important element in many transpersonal experiences. Wilber speaks of *nature mysticism* in describing transpersonal experience. Nature is also considered a major trigger for *peak experiences* as defined by Abraham Maslow. Various research studies conducted during the mid- and latter-part of the 1970s indicated that the experience of the beauty of nature led to an intense spiritual experience that, in many cases, had a lasting influence on the person.

MOTIVATING FORCES

Several major paths tend to bring people to embrace ecopsychology. One is the call to environmental action based on recognition of the distress of the environment, be it on the local or the global level, and a desire to enhance our efforts to protect or improve the environment.

Adherents of this path of ecopsychology seek to shift the motivation for environmental action away from punitive legislation to a positive approach in which interventions will be more effective and sustainable over time. Ecopsychologists thus seek to call upon our love of nature and, through the fostering of greater intimacy and broader identification with the natural world, engender place-attachment and environmental engagement. They attempt to motivate others to action for the environment, suggesting, for example, that we "Save the Whales" or "Keep America Beautiful!" rather than merely inciting protests against such entities as oil companies or fishing enterprises.

Dave Foreman, environmentalist and author of *The New Conservation Movement* (1991), reminded his colleagues the greater goal of their work is to "open our souls to love this glorious, luxuriant, animated planet." In his opinion, exclusive reliance on blaming and shaming exacts a heavy emotional toll that is damaging one's own mental health. Action motivated by guilt exacerbates the problem. If we act without introspection, our actions are likely to be incomplete and fragmented. More than likely we might make some token move only to fall back into denial and minimization of the depth of the problems we are called to confront.

Theodore Roszak, a historian by training who studied the making of the counterculture of the 1960s and contributed to the literature of the ecopsychology movement (*Voice of the Earth*, 1992), noted that biologists made a significant contribution to the current of change as they began to pay attention to the psychological dimension of human evolution. As their work progressed, some, most notably Harvard University scientist and Pulitzer Prize-winning author Edward O. Wilson, raised the possibility that we humans possess a capacity they referred to as *biophilia*, a trait they defined as the innately emotional affiliation of human beings to other living organisms. Although others were quick to suggest that we possess an equally strong trait of *biophobia*, from Roszak's perspective, both our love and our fear of nature were emotions and worthy of study. Both, as they translate into devotion, respect, concern, and awe, can be used to rebuild our strained bonds with the natural environment.

Recent environmental challenges, such as that of global climate change, have prompted environmental psychologists to devote attention to the reciprocal and structural relationships existing between human health and the health and integrity of the natural environment. The May-June 2011 issue of the *American Psychologist*, devoted to the topic of psychology and global climate change, called for ecological literacy, an understanding of how natural systems affect each other and how human causality can lead to indirect and unpredictable effects on the earth's climate. Articles included in this issue offer insight into various aspects of social, emotional, and cognitive factors that contribute to our appreciation of climate change as environmental distress or that flow from the impact of global climate change on our lives. The articles noted the range of emotions associated with climate change, including anxiety, worry and depressive emotions such as grief and despair in conjunction with the loss of security engendered by uncertainty regarding the health and continuity of earth's natural systems. Attention is also given to the psychological barriers, such as denial and apathy, as well as inter-group conflicts that tend to limit behavior change in this area.



Another path that draws people to ecopsychology is one in which they have had exceptionally positive experiences in the natural world coupled with a wish to promote these experiences for others. These experiences are often related to an awed amazement at the beauty of nature that affords the participant a spiritual awakening. One might think, for example, of an experience of what is often termed cosmic consciousness and described as an "oceanic" sense of the beauty and unity of creation—with the participant an integral part of the whole. Others are sometimes related to the deep healing of long-standing conflicts or illnesses of the spirit that respond to wilderness experiences.

Several authors have recognized ecopsychology as a wisdom path and have brought to our attention the views and ritual practices of indigenous peoples and earth-centered cultures. Ralph Metzner, who developed a "green psychology," connected the study of ecopsychology with the earth wisdom of the old folkways of Europe. Self-styled spiritual pilgrims who are also activists and writers, Elizabeth Roberts and Elias Amidon offer a collection entitled *Earth Prayers*, a poetic statement of ecopsychological wisdom.

CONTRIBUTIONS OF ECOPSYCHOLOGY

Robert Greenway, founder of the International Community for Ecopsychology, expressed frustration in that *ecopsychology* tended to be something of an umbrella term. He presented six faces of ecopsychology: as a container for discussions about nature, as a basis for healing—for a new therapy, as a call to action, as experiential, as spiritual practice and as a language. Although the overlapping of these categories tended to make a working definition and differentiation of the field difficult, the number of different aspects did suggest that ecopsychology might find applications across a broad spectrum.

Today, perhaps more so than in the early days of psychoanalytic practice and other types of psychotherapies, there is recognition of the healing engendered by encounters with the world of nature. Whether one is dealing with relatively mild stress or severe emotional trauma, it is not unusual to find therapists recommending activities that range from physical exercise to meditation to be performed outdoors, particularly in settings of natural beauty. Relaxation, stress

reduction, and mindfulness, the restoration of balance and serenity, all these benefits are achieved faster in a natural vs. a built environment, whether the setting is that of the nearby nature of one's own garden, a local park or wilderness.

Thanks to the influence of the ecopsychology movement, recognition has been afforded to the realities of ecological anxiety, grief, guilt, and despair and their legitimacy as a focus of psychotherapy. Combining her training as an environmentalist and as a hospital chaplain-grief counselor, Phyllis Windle explored her love, and that of fellow scientists, for the species and places with which they worked. She identified people's ability and willingness to admire and care about other species and places as admirable qualities and people's attachments as necessary and important, not only to scientific work, but also, in some cases, to fulfill needs unmet by other people. She also noted the need to grieve the losses of various species, the destruction of favorite places due to construction, or the loss of a single well-loved tree without dismissing grief feelings as irrational or inappropriate.

Both the love and the grief that Dr. Windle spoke of are not limited to the

Therapist Terrance O'Connor identified the patterns of control, denial and projection that sabotage healthy human relationships as the same patterns that endanger the world.



scientific community, however. Therapist Terrance O'Connor identified the patterns of control, denial and projection that sabotage healthy human relationships as the same patterns that endanger the world. Changing these patterns through therapeutic interventions, in his opinion, would affect not only our interpersonal, social lives but also our relationship to our planet. In his own practice, he brought the concerns of the planet into his consulting room in an effort to aid clients struggling with the purpose and meaning of their lives to broaden their horizon, rather than see their struggles in isolation from the movement of life around them. He also encouraged the therapeutic community to use the tools at their disposal to contribute to awareness of a rapidly and profoundly changing planet.

Horticulture Therapy

The entire field of horticulture therapy, although well-rooted in past practice, has rapidly developed as a treatment modality in the past twenty-five years. It was long recognized that peaceful garden settings held curative benefits for those with mental illness. Witness, for example, the beautiful grounds of institutions such as St. Elizabeth's Hospital in Washington, D.C., where one could find native and exotic species of trees and a variety of flowers, as well as large greenhouses where selected residents could share in

the work of the gardeners on staff, growing the produce that was served to residents and staff alike. In more recent times, however, horticulture therapy has come to be viewed as a process in which plants, gardening activities, and the innate closeness felt toward nature is used as vehicles in programs of therapy and rehabilitation.

During World War II, Carl Menninger, a pioneer in the field of psychiatry, initiated a horticulture therapy movement in the Veterans Administration Hospital System, while in the 1950s the therapeutic benefits of gardening for people with chronic illnesses became widely recognized. The American Horticulture Therapy Association is dedicated to the creation of barrier-free garden spaces for people with wide ranges of abilities and with various physical and mental disabilities. A visit to a garden for the blind, for example, reveals an emphasis on texture and fragrance. Raised beds make participation in the garden possible for the elderly while gently graded walkways allow for easy use by those persons who are wheelchair bound.

Animal Assisted Therapy

Today, animal-assisted therapy has joined the ranks of accepted health-care approaches, especially for the elderly and for children. Simply watching fish in an aquarium has been shown to decrease blood pressure, at least tem-



porarily. Various reports link improved survival following heart attacks to owning and caring for a pet. Pets can be of help to Alzheimer patients by bringing their focus of attention back to the here and now. Many elderly persons living in nursing homes or assisted living facilities have benefitted from visits by trained animals or a visit from their own pet. Some facilities have allowed family members to keep pet bird cages in their loved one's room. As one researcher noted, the most serious disease for older people is not cancer or heart disease; loneliness is far worse. Pets are one of nature's best sources of affection and stroking the animal soothes through the sense of touch—especially important for those who have few visitors with whom human touch might be exchanged. The attentiveness of a pet can engender relaxation and calm while their antics encourage laughter and liveness, thus dispelling mild forms of depression and boredom. An animal's presence also can offer a sense of security and protection to those who feel vulnerable. In those physically able, they encourage exercise and have the potential to facilitate broadening one's circle of acquaintances.

Children, especially those who suffer from autism or who have been abused or neglected, frequently are able to respond to the non-verbal communication of the animals far more easily than they might respond to overtures

from an adult. Pets offer a safe place for children with emotional problems as they offer unconditional, non-judgmental love and serve as a security blanket in times of stress. Therapeutic riding programs that instill self-confidence and build self-esteem have provided opportunities for growth for children with a variety of physical and mental deficits. As care of the animal is an integral part of the program, children also learn to take responsibility for and have the opportunity to play a nurturing role toward the animal, shifting from a narrow self-focus and developing a connection to a larger world.

The Wilderness Experience

Since the 1960s, there has been a movement toward what is commonly called *wilderness experience*. These experiences have been part of college curricula and have been incorporated into other educational contexts, for example, for high school students and students with Attention Deficit and other psychosocial or behavioral disorders. Wilderness experiences have been used by various agencies to build self-confidence and self-esteem, autonomy and an ability to cope as well as fostering group cohesiveness and cooperation in at-risk youth, often in an effort to turn a pre-delinquent or budding gang member in a more positive direction. While the locale and specifics of the programs varied, the essential experience involved

a shift from culturally reinforced, dualism-producing reality processing (us vs. them) to a more non-dualistic mode. Need-fed ego processes yielded to a simpler, more spacious awareness that allowed for new connections to nature in its myriad forms and encouraged participants to find their appropriate place in the larger web of life. Those involved in such endeavors tended to report transfer of learning from the wilderness to the urban or suburban home settings. While personal experiences varied widely, most participants reported increased respect and appreciation for the natural world and for each other.

Rearing and Education of Children

Richard Louv's book *Last Child in the Woods* (2005) was inspired by his recognition that the bond is breaking between U.S. children born in the past two to three decades and the natural world. As the boundaries of the child's world grow ever tighter due to fears of urban traffic, crime and "stranger-danger," a growing body of research is demonstrating links that tie our mental, physical and spiritual health directly to our association with nature. Louv recognized a need to save children from what he termed "nature deficit disorder," the human costs of alienation from nature. Among these costs he noted diminished use of one's senses, attention difficulties, and higher rates of physical and emotional illnesses. In



contrast to deficits, he also focused attention on natural abundance, that we might become aware of how blessed our children could be biologically, cognitively and spiritually through positive physical connection to nature.

One of the middle schools in Montgomery County, Maryland, has adopted a rite of passage for its sixth grade students. It consists of a three-day, two-night environmental education field trip. Its motto: "Leave No Child Inside" is designed to help students connect classroom learning with the real world. This year, the trip focused on the health of a pond and included night hikes (no flashlights) to view the stars and to hear the sounds of insects and nocturnal animals. The experience is tied to the curriculum, for example, various facets of science, math and vocabulary-building are introduced in the course of this hands-on experience. In addition, as the principal noted, the experience builds confidence as the students step out of their comfort zone into a natural environment and also fosters the establishment of relationships early in the school year.

Stewardship

One of the issues Louv raised in his book was the future of the stewardship ethic. He noted studies of environmental activists in locales the world over indicate that childhood experiences are

significant precursors for adult activism on behalf of the environment. The stewardship ethic, however, extends beyond the raising of future activists.

A manifestation of the stewardship ethic may be found in the mission of the Earth Charter Initiative and in the Preamble of the actual Charter itself. The Initiative seeks to promote the transition to sustainable ways of living and a global society founded on a shared ethical framework that includes respect and care for the community of life, ecological integrity, universal human rights, diversity, economic justice, democracy and a culture of peace. The section of the Preamble devoted to "Earth, Our Home" reflects the influence of ecopsychology. It recognizes that we are a part of a vast evolving universe and that Earth, our home, is alive with a unique community of life. The resilience of the community of life and our well-being depend upon preserving a healthy biosphere, ecological systems containing a rich variety of plants and animals, fertile soils, pure water and clean air. The Charter notes that the global environment, with its finite resources, is a common concern of all peoples and the protection of Earth's vitality, diversity and beauty is a sacred trust.

At present many religious communities and parish groups have recognized environmental issues as a significant segment of their work for justice

and peace and have sought to incorporate tenets espoused by the Earth Charter Initiative. Projects and interests are as varied as the people running them and reflect needs of specific locales. The Columban Fathers Justice and Peace Office, for example, organized ecological projects that deal with local concerns in Valparaiso, Chile. Among them were a campaign to protect the endangered Chilean palm and a second to recover and value native seeds while rejecting all forms of genetically modified seed.

At the same time, the Columbans also work on education about social issues related to the environment, one of which is the value of a huge hydroelectric plant planned for Patagonia. Here the issues are two-pronged. One, the project will bring wealth to a few but offer little to most others. A second issue is the impact on the environment as high-tension cables are strung from the south to the north of the country to fuel mineral refining, one of the main pillars of the economy.

ECOPSYCHOLOGY AND SPIRITUALITY

While it may be tempting to consider nature's abundance and focus on the benefits afforded us, Louv warned against the *commodification* of nature, valuing nature for its *usefulness* to us rather than honoring it in and of itself.

The Earth Charter also cautions against this focus on the *useful* elements of nature and asks that we recognize that every form of life has value regardless of its worth to human beings.

A term currently in use, *spiritual ecology*, refers to the intersection between religion and spirituality and environment. Most of the major world religions offer pro-environmental teachings and there is increasing willingness by clergy and religious teachers to encourage the required behavioral changes needed to promote a Creation-centered spirituality.

The works of Thomas Berry, for example, exemplify the manner in which religion and spirituality provide guidance and motivation to work on environmental causes. In his book *The Great Work* (1999), Berry sees our entrance into the twenty-first century as a unique moment of grace, a privileged moment that has cosmological, historical and religious dimensions as a new vision and new energy are coming into being. While acknowledging the tragic and destructive dimension of this time, he also views it as a creative moment, one in which we are invited to come to appreciate the gifts that Earth has given us. In his opinion, a younger generation is growing up with greater awareness of the need for a mutually enhancing mode of human presence to the Earth and with the foundations of a new historical era, the Ecozoic Era, that have been established in every realm of human affairs. He cautions, however, that we must realize that moments of grace are transient, that transformation must take place within a brief period or be gone forever.

Francis of Assisi, Teilhard de Chardin, Henry David Thoreau, Rachel Carson and Wendell Berry represent those whose experiences in nature transcend the scientific, material environment and, along with author Matthew Fox, present a mystical, wisdom-centered cosmology for our times. In his book, *The Coming of the Cosmic Christ* (1988), Fox offers an alternative to the thesis of Enlightenment theologians in a regrounding of faith in a mystical, prophetic and cosmological worldview. Through the archetypal symbol of the Cosmic Christ, he encourages reverence for our origins grounded in the awesome mystery of creation as understood in current science. In addition, he also

promotes reverence for divinity dwelling within us and urges us to assume responsibility as co-creators, inviting us to walk in the footsteps of Meister Eckhart and recognize that we truly are God's sons and daughters. He presents wisdom as the legacy of a living cosmology, the gift of the Cosmic Christ resurrected. Science, mysticism and art come to life, he indicates, in order to awaken us all to wisdom.

One of the major contributions of the science of ecology is the rediscovery in a modern context that "everything is connected to everything else." Matthew Fox sees in the Cosmic Christ "the pattern that connects." Reflecting on the hymn contained in Paul's Letter to the Colossians (1:15-17), Fox indicates that a crucial connection is made between our moral behavior and our knowledge and love of the universe that encourages us to act out the wisdom of the universe. Moving to another great hymn in the Letter to the Philippians (2:9-11), he sees the pattern connecting divinity and earthiness, emptiness and fullness, suffering and accomplishment—connecting all creatures in the entire universe. Fox termed deep ecumenism one facet of the cosmology that the Cosmic Christ ushers in. He used this term to designate a movement that would unleash the wisdom of all world religions, for in this he sees the last hope for the survival of our earth. To achieve this *deep ecumenism* he advocates that we of the Western world rediscover the roots of our mystical heritage in order to enter into dialog with the religions of the East and with the mystical experience of the native peoples the world because mysticism is a common language that speaks of common experience, the great underground river of divinity.

Our artists, poets, and philosophers seem to sum up the desire of the ecopsychology movement best. Earth photographer and philosopher Frank Saxton indicates: "Prayer and intention may now be our last, best hope of restoring the Earth. My hope is to make enough meaningful connections between people and our world to form a significant global intention."

It is my intention for the Earth
That the air be clear,
That the water be pure,
That the ground be nurturing,

That all living things
Exist in harmony and balance.
May we and our descendants
walk in beauty all of our lives.

Poet e.e. cummings captured something of the season of spring and resurrection when he wrote:

i thank You God for most this
amazing
day: for leaping greenly spirits
of trees
and a blue true dream of sky;
and for everything
which is natural which is infinite
which is yes

Through our appreciation of the greening of the earth and our willingness to connect with our Earth and the other-than-human inhabitants with whom we share this planet, may we leave a legacy of love and beauty to the next seven generations of our children.

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Interconnections

Seeing the

Elaine Prevallet, S.L.

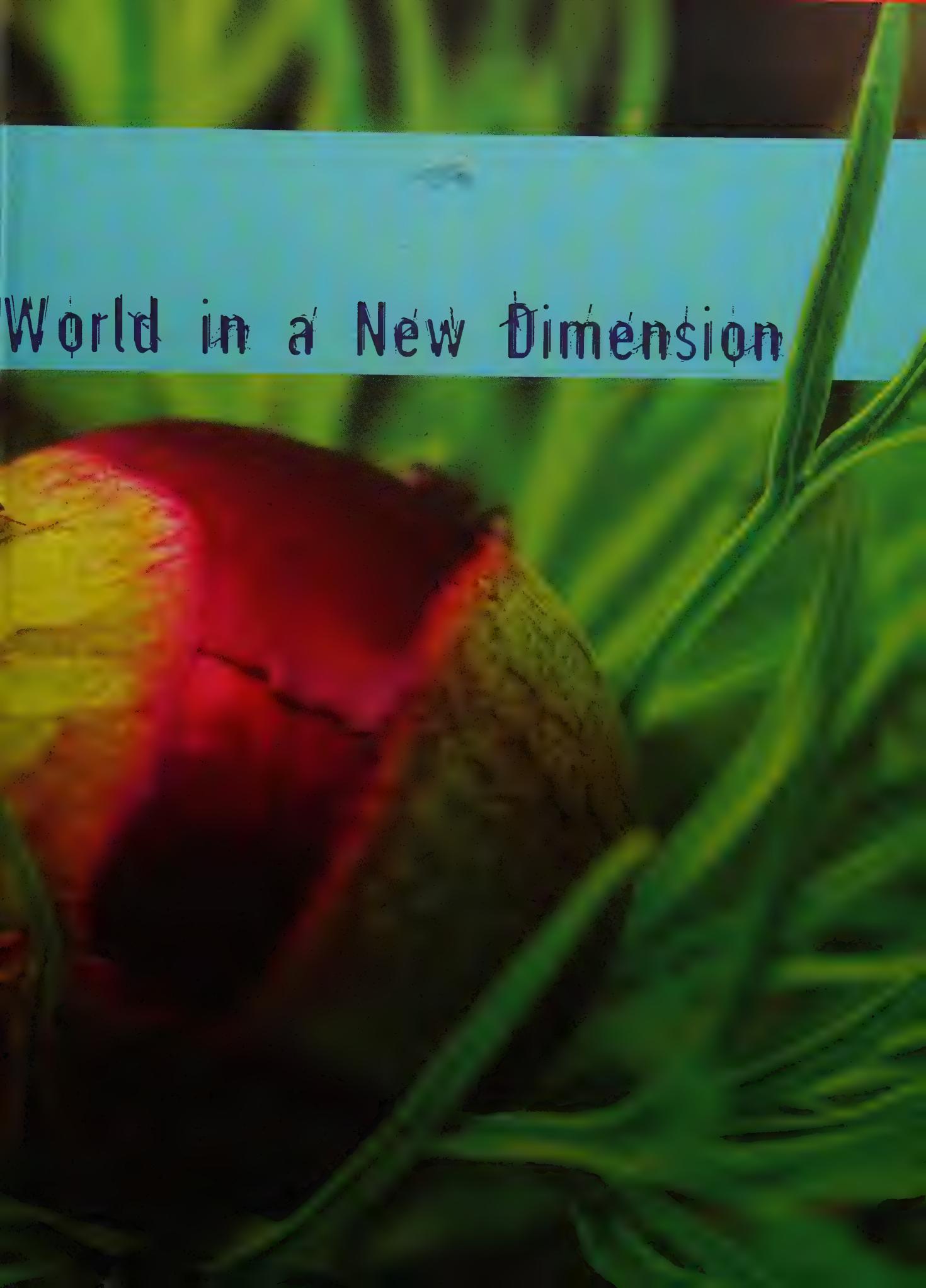
For our age, to have become conscious of evolution means something very different from and much more than having discovered one further fact....

It means (as happens with a child when he acquires the sense of perspective) that we have become alive to a new dimension.¹ Those words of Teilhard de Chardin caught me up short: *alive* to a new dimension? The universe as we know it now requires that we connect 13.7 billion years of development since its origin in the Big Bang, with the evolution of life on planet Earth. The story of the cosmos and our human story is one single narrative, for our planet and its life-forms have emerged out of eons of cosmic development.² And yet, for how many of us is evolution anything more than a fact, or a scientific hypothesis? Have we really considered what difference it makes to our sense of who we are? Has our perspective really changed, and if it has, *how has it changed us?*

Half-a-moment ago (in cosmic time) scientists were persecuted for proposing that Earth was not the center of the universe. Now we take for granted that Earth is one very small planet in one galaxy among billions, whirling around a star which we call the sun. Scientists speculate that we humans know only 4-6% of the extent of the universe; black holes have as yet defied human exploration. Half-a-blink ago (in cosmic time) we wouldn't have guessed that there is a connection between stars and water and fish and a human! We didn't know how to connect the dots. But now we are making all these observations with Earth-instruments, interpreted by our Earth-formed eyes and ears, brains and imaginations. This is how the universe looks *to us*.

Historical consciousness is inescapable. We humans are in the process of shifting our perception from a worldview in which everything is solid, fixed and permanent. We are adjusting our vision to a universe in constant change, always expanding and always in the process of evolving. Seen through this new lens, the world looks very different. Things we perceived as large may now seem very small; things that mattered very much no longer seem so important. New issues, new relationships come center stage.

We may feel disoriented, for when the frame changes, everything changes. It is not only our cosmic-Earth-human story that changes, but our faith changes as well. We recognize that the Creator has been creating from the very beginning, both as the Source of this continually emerging marvel, and throughout the whole process of its development. Creation is now present tense: God didn't just create "in the beginning," but is creating now! Just as there is no "out there" to throw our trash, there is no "heaven out there" where God can dwell in solitary splendor to punish or reward us. The universe is a single, continuous event happening even as we live and move.



World in a New Dimension

INEXTRICABLE CONNECTIONS

Sciences are redefining the human. We are no longer the separate, autonomous beings we once thought we were. Physics identifies us as dense configurations of energy with no distance between us, energy fields which are continually affecting and being affected by the larger world. Biologists image single cells joining into multi-cellular organisms, continually mutating, moving forward, organisms nested within organisms to create novel, complex, increasingly conscious communities of life. We humans are composed of trillions of cells which form innumerable communities—our livers, our hearts, our lungs—and each is a community of life, each connecting with a myriad of other organisms in continual exchange. Each of us is a community within a community.³

We are just beginning to recognize ourselves connected as one human family, and all species that have preceded us on the planet—and beyond—as our ancestors. This composite of organisms that we call humanity is sending out and receiving messages from all that surrounds us—the air, the sun, the moon, the ocean tides—modifying our temperature, our metabolism, our feelings, our thinking. Oceans, mountains, flatlands, deserts, atmospheres—innumerable more connections than we can imagine and whose workings we cannot begin to fathom. And every single individual cell has its own contribution to make in connection with all others. All are intended to serve the well-being, life-enhancement of the whole. Imagine an organism named humanity, drawn together with all the rest of creation in a kind of coherence; a synergy. It is the image of the Body of Christ, in a new, immensely larger frame: “All things have been created through him and for him. . . . And in him all things hold together” (Colossians 1:16-17).

Technology—satellites, television, the internet, Blackberries—has given birth to a “global brain,” forcing into our awareness the inextricable connections between and among Earth’s communities of life. Think, for instance, of the emerging awareness of climate change, of the “green” movement, as well as connections between political movements like “Occupy” and the voice of non-violence. We have to realize that we are only beginning to live into this new worldview as our hope of survival. The organism “humanity” is drawn together in networks that span the globe. And yet, though technology may *connect* us, it cannot *unite* us. “Love alone is capable of uniting living beings in such a way as to complete and fulfill them. . . . for it alone takes them and joins them by *what is deepest* in themselves.”⁴ This is where the task lies. How will we be joined by what is deepest in ourselves? How can we help each other develop that kind of sensitivity?

THROUGH A DIFFERENT LENS

Sometimes great gifts come in simple packages. When I found some peonies coming to bud in front of my house, I was horrified to see ants swarming over the tightly closed surfaces. I imagined that the ants were going to eat up the flowers before they had a chance to bloom. When I shared my anxiety with friends, they were, predictably, amused. Ants, they explained,

are essential to the blossoming of peonies, eating off the sticky substance covering the bud so that the flower can open. Far from being destructive, the ants were playing a crucial role in the life cycle of the peonies. For me, making that connection represented a milestone.

I was witnessing a very fundamental pattern of cooperation in nature, but I had immediately interpreted what I saw through the filter of competition—our U.S. cultural lens. Connections are essential for survival! I read about—and began to notice—how Earth’s creatures live in generally harmonious relationship with their environmental companions, each one in its niche, contributing its own gift, relying on the contribution of the others. How quickly carrion birds appear for a meal from road carnage. How quickly cow droppings attract dung beetles to work on their decomposition—getting a good meal for themselves, and preparing the offal to enrich the soil. The more I set myself to notice, the more I realized that I was finding cooperation everywhere. There is violence, struggle, and death as well, but nature seems to fine tune each creature so that it can cooperate in life-giving ways with other species in its own habitat. The ants on those peonies shifted my worldview.

It seems that humans are the only species that has not found its niche, its way of living in harmonious relationship with the rest of creation. We humans have become entranced (literally) with seeing reality through the lenses of individualism, domination and competition. We carelessly disrupt natural patterns of cooperation. But seen within the big picture, each of us is one very small participant in an enormous planetary process of mutual life-sharing. Every member of the “food chain” is the gift of a living species. We are one single, interconnected and interdependent creation, all-of-a-piece, one community of life. We do not “own” our lives; life is a shared project in which every one must inevitably be participant. *Nothing* can exist without sharing its life.

We simply do not see aright. Or maybe more accurately, we see through deceptive filters of independence, domination and competition—the age-old survival instinct—while our humanity has evolved capacities like reason, imagination and compassion that can transcend that instinct. But we have missed connecting two indispensable dots: we have not recognized and hallowed the obvious connection between the Passover of Jesus—his death and resurrection—and the continual cycle of dying/giving birth to new life that characterizes the whole creation—even the stars. The rest of creation is continually participating in my life process, keeping me alive and healthy, but do I willingly and consciously participate in the death/birth that sustains and enhances ongoing life? The central mystery of Christianity—the death and resurrection of Jesus—is the key: if we are not willing to “lose ourselves,” to relate to Life humbly and sensitively with the rest of creation, we cannot survive. How do I learn to see with broader vision, with new eyes? What might we learn from the ants?

ENCOURAGING A HEART-SPACE FOR GOD

At this juncture of history, we encounter what I believe is the most serious problem for Christianity today, and one which

counselors and spiritual directors must face squarely. For many, the words “God” or God’s “presence,” may carry useless and misleading baggage. Even “Our Father, who art in heaven,” will no longer speak to persons who understand creation—and our own human being—in context of an ever-expanding, evolving universe.⁵ The traditional frame of reference is far too confining; ancient dogmatic formulae are at risk of turning stagnant. Many people are confused, feeling literally dis-illusioned, as if they have lost their moorings. Church rituals and liturgy seem distant and lack a sense of reality. People may “leave the church,” but long for a worshipping community. They want to pray, but wonder to whom they are praying. “Religion” seems to belong to a world that no longer exists. And yet an obscure and mysterious sense of the divine seems to nudge them. The mystery and magnificence of the universe evoke a deep sense of awe. People seek something they cannot name.

We Christians hold—or say we do—incarnation as central to our faith. In Jesus Christ, God is revealed in human form. Though we learned as children to say that “God is everywhere,” we had little sense of what that might mean. For us the light is still dawning: perhaps we may begin to see incarnation in a new way, with broader extension. Emmanuel, God-with-us, has always been present, actively engaged in the process of creating at every moment, everywhere. Newly differentiated forms emerge as struggle and death yield to new life. Do we need to connect some dots here?

The role of spiritual companion or director becomes critical in helping persons find new ways of approaching the Divine, ways to honor the divine transcendence, while yet pointing to the experience of God’s immanence in the universe, creating everything here and now. The way is open for a new encompassing awareness that we actually do live in God, and God in us, as Jesus taught (John 14:20; 17:21ff.).

We ourselves must be very attentive, aware of our own language, learning to open our own senses to the presence of Holy Mystery right here in our midst. And equally, we must listen very carefully as we hear others trying to name their experience, groping for words to express something which is known at a very deep inner level, but without the words to name what it is. No image can contain this God; an apophatic approach will be inevitable. We need meditation forms that honor the experience of silence and “not-knowing” in the face of Holy Mystery. At the same time, the utter beauty, the intricacy, the immensity of the universe require expression, and need prayer forms that joyfully celebrate the Divine Presence immersed in creation. And always, we need to point each other toward generous, self-giving participation in the paschal mystery as it comes to expression in “all creatures great and small.”

Maybe we are learning. Science presents a universe that is more mysterious, immense and elegant than we could ever have imagined; it is also inseparably woven together. There is invitation to overwhelming awe at every moment. But we cannot stand gaping, waiting for God to “hear the cry of the poor.” We ourselves, God-in-us, must embody that responsibility. God waits to work in and through us, through our evolved capacities of imagination, compassion, action. We know by heart the list of tragic, crying needs of our species and our planet. We feel deeply the pain of both human and other-than-human creatures whose habitats and livelihoods, whose water and food supply are now polluted with toxic waste. Our hearts and minds are challenged to become what only we can be. We are the conscious, healing and unifying agents that Life’s cosmic process has developed to serve the Earth.

Now we know the lines to connect these dots. We have to internalize the fact that our lives are not our own. Each life is participating in a far larger “project” than we had imagined—the





project of the Larger Life's continuing evolution on the planet. Our Christian response to Jesus' call to witness with our lives to "the reign of God" now moves into a larger context. Our species is itself imperiled, but even more, the continuing development of life is at risk. Our participation in the in-coming reign of God must embrace not only humans, but all species, the planet, perhaps even the cosmos. Our hearts must expand in tandem with the broadening vision. The "reign of God" must be—will be—our evolutionary future.

We have an immense task ahead of us: to help each other move into a much larger, more encompassing frame of awareness, and to find the language to express our new awareness of God's creating presence pervading the whole universe. Traditionally, the Holy Spirit is the one who has a penchant for connecting. And all across the globe, Holy Wisdom is in fact nudging in amazing ways, prying open doors to bring us all into the deep communion of Love that is the pinnacle of our human capacities. That nudging is being felt as humans begin to experience a new vision of the oneness of this creation. In the end, the whole is held together only by uniting in the One Great Love. We all *belong* together.

As we begin to really sense that connection in our bones and our pores, we have a new hope. We can become a new creation—a creation where love and caring and compassion for the whole creation are real bonds that hold us together. We've begun to connect the dots. Everything—our minds and hearts and way of living—needs to change. It is a wonderful thing the Holy Spirit is doing, bringing us new vision, new hope, prod-
ding us into the unity of a new creation.

ENDNOTES

1. Pierre Teilhard de Chardin, *Science and Christ*, trans. Rene Hague (New York: Harper & Row, 1968), 193.
2. In a recently released film, *Journey of the Universe*, Brian Swimme, Mary Evelyn Tucker and John Grim have captured in awesome imagery the deep mystery that underlies the expansion and evolution of the cosmos and of life on Earth. See www.JourneyoftheUniverse.org.
3. Bruce H. Lipton and Steve Bhaerman, *Spontaneous Evolution: Our Positive Future and How to Get There from Here* (New York: Hay House, Inc.), 2009.
4. Pierre Teilhard de Chardin, *The Phenomenon of Man*, trans. Bernard Wall (New York: Harper Torchbook, Harper & Row, Publishers, 1959), 265.
5. "The danger here is that the deity may then come to seem smaller than the universe itself. The 'size' of God becomes too middling to command the response of genuine worship." John Haught, *Deeper than Darwin* (Boulder, CO: Westview Press, 2003), p. 33.



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A Recipe for Sound Ecology

Rev. Eugene Hemrick



As I sat in gridlock, at least 100 cars and buses were behind and in front of me with their engines idling. It had taken me approximately an hour to drive from the U.S. Capitol to the White House, a distance of one mile. I wondered how many barrels of gasoline are wasted daily in similar circumstances. Addressing the nation, President Bush said we need to depend less on oil. He should have been more imaginative and said that we need to be more visionary in conserving energy. . . . If we are to win the battle of energy efficiency, another major principle must come into play. The more we and our children stretch our imaginative capacities now, the more secure the future of our energy resources will be.

Imagination plus creativity plus modeling equal the power to create revolutionary movements needed for making ecological progress.

I wrote these words in a 2006-syndicated column for Catholic News Service. Today I would assert even more forcefully that the cry for imagination and creativity rings louder than ever. Promoting ingenuity and pursuing new knowledge are ingredients in one of our best recipes for reducing the deadly effects of pollution, global warming and depleting the earth's valuable resources. The more new insights are sought and penetrating questions are raised, the greater the probability of ecological success. U.S. physicist Robert Hutching once said, "God pity a one-dream man." New demands of our ecological age are urging us to dream dreams that expand our imagination and creativity like never before. But is this really enough to succeed, or is yet another means needed to truly thrive? The answer is yes to the latter, and the other means of which we speak is sacred realization: a profound consciousness of the Creator responsible for our ecosystem! Allow me to cite two ecological success stories to learn what is implied and required by this assertion.

COMBINING IMAGINATION AND CREATIVITY

When walking through our botanical gardens in Washington, D.C., this summer, I stumbled upon an ecological project worth studying and duplicating: a rain garden. A rain garden can be any plot of land that is sculptured with dips and rises throughout it. These small shallow valleys capture rainwater and allow it to sift into the ground at a slow even pace. The sifting of rainwater purifies it while also halting it from quickly running off into sewers and ultimately polluting rivers, lakes and bays.

A placard in the garden explains that 40 percent of water consumed in Washington, D.C. is used for watering lawns. When rainwater is collected in a rain garden, it takes approximately a day to sift down into the ground and purify itself. As a consequence there is no standing water for incubating mosquitoes, and no polluted water running off into the sewers. Recently, it was reported that the Potomac River in Washington, D.C., received

a D grade. Heavy rains and quick runoff of chemical-filled water are reasons for toxicity levels leading to the D rating.

Next to the rain garden sits a rain barrel. Another placard explains it can save gallons of water that can then be used for watering gardens and lawns, among other things.

As I reflected on this, I realized I learned something new, creative and needed. Our hot, sun-baked summers often leave lawns burned out. Sometimes it becomes so dry that the city calls for mandatory conservation of water. With little water in the ground the roots of trees become shallow. When a heavy rain does come, trees that aren't deeply rooted tend to fall down.

The creation of rain gardens and rain barrels teach us that with a little imagination and creativity, we can achieve conservation at its best. Not only are they exciting and useful, but these inventive projects often become models for others to replicate. Take, for example, Chicago's roof-top gardens that keep buildings cooler in hot summers, and also produce vegetables, flowers, bushes and trees that purify the city's air. Once word was out on the success of this project, city managers from around the country flocked to Chicago to learn how to implement it in their cities. Not only this, but Midway Airport posted the success of this project throughout its corridors in order to inform and inspire travelers from all parts of the country and world.

As is evident, the above projects contain one of our most effective formulas for significantly improving our ecosystem: imagination plus creativity plus modeling equal the power to create revolutionary movements needed for making ecological progress.

Now to a second example that completes the equation for success in our formula.

On visits to Saint Vincent Archabbey in Latrobe, Pennsylvania, I frequently walk the grounds. It wasn't until recently that I discovered forty-four acres of wetlands on them. After coalmines shut down in Pennsylvania, water flooded them. As a result the water rose to the surface forming rusty,

polluted swamps. The monks at the monastery and St. Vincent's college science department devised ways of purifying this muck and making it ninety to ninety-five percent clean. Not only was purification a success, but the pollutants that were sifted out were also used to make tint that is the basis of paint. I also learned that the wetlands are now home to several species of birds, flowers, butterflies and animals. Each year hundreds of children take educational trips to study these wonders of nature. No doubt, St. Benedict must be smiling in heaven at seeing the Benedictine commitment to education at its best.

In conversation with St. Vincent's prior, Father Earl Henry, O.S.B., we spoke about imagination, creativity and the modeling behind the success of the wetlands. I asked him what this had to do with the Benedictine spirit. "St. Benedict," he replied, "considers all things of the earth sacred vessels."

In that brief reply we learn that once sacredness becomes the cornerstone of the ecological formula for success, it provides spiritual motivation for valuing our ecosystem. In addition to keeping the ecosystem healthy for the good of humankind, we are honoring it as stewards of God's creation. A whole new way of thinking about preserving our ecosystem is opened up by adding the dimensions of reverence and sacredness to it.

STANDING IN AWE

In German, the word for reverence is *ehrfurcht*, meaning to stand in awe of greatness, and to avoid possessiveness or taking a gift for granted. In St. Vincent's eco-project science and spirituality complement each other; imagination, creativity and modeling leap from earth-bond-ness to heavenly awesomeness; Creator and creature bond together; and sacred inspiration works side by side with human perspiration. Ultimately, the motivation level and awe for reverencing the ecosystem is raised to new heights.

In his book *Power and Responsibility* the renowned theologian Fr. Romano Guardini moves us deeper





into the profoundness of sacred realization. He starts by pointing out that our post-modern age has acquired unheard of new powers. For example, we have achieved power over the atom, and we can harness the power of water, wind and sun to create energy. In the midst of these newly found powers, Guardini asks, where is our means of salvation? What will lead us into the future, most of which we dream, keeping us safe from self-destruction due to abuse of power and resources?

To answer this Guardini asks, "What is the decisive characteristic of the Christian message of salvation?" He answers: "It is expressed in a word which in the course of the modern age has lost its meaning: humility."

We find an echo in St. Paul's letter to the Philippians:

Though he was in the form of God, [Jesus] did not regard equality with God something to be grasped. Rather, he emptied himself, taking the form of a slave, coming in human likeness; and found human in appearance, he humbled himself, becoming obedient to death, even death on a cross.

No doubt some will argue that because of humility's weak appearance it doesn't have much chance of impacting today's ecological challenges. How then can humility impact our ecological challenges? Humility has power, and

that power comes from God, who selected humility as the first means for our salvation. This power is why St. Gregory the Great calls humility "the mistress and mother of all virtues." For St. Thomas Aquinas, humility is linked with magnanimity. He tells us that the humble person can achieve great things for God and for others because "living no longer for himself . . . the spirit is delivered of all the limitations and vicissitudes of creaturehood and contingency and swims in the attributes of God."

Abuse of the earth is due to corruption and selfishness taking precedence over the common good. Laws are bent in order to remain in power. Greed and a spirit of get-it-now-don't-deny-your-self overrides self-denial, sacrifice and the

prudent foresight needed to insure a healthy ecosystem.

In regard to these evils, Guardini observes,

Equally evident is the danger of power, the danger of revolt against God—the danger, above all, of no longer being aware of him as the serious reality; the danger of losing the measure of things and lapsing into the arbitrary exercise of authority. To forestall this danger, Christ sets up humility, the liberator which breaks asunder the spell of power.

Note the choice of concepts Guardini employs: "no longer being aware of [God] as the serious reality," "arbitrary exercise of power" and "the spell of power."

When we no longer are aware of God, the sacred realization that is needed to successfully complement creativity, imagination and inspiring modeling is missing. God's power in helping us transcend our little self-contained world is left out of the equation of saving this planet. We become our own guiding principle. But as any person of wisdom will tell you, to speak and act authoritatively you need to go beyond your own authority and surround yourself with other revered authorities. No one is self-sufficient or the authority unto himself or herself. As God the Father, Son and Holy Spirit work together, so too, must the Trinitarian model be adhered to for true success in ecology.

In the thesaurus, the word "arbitrary" is synonymous with subjective, random, capricious and illogical. Note how each of these synonyms denote disorder, the direct antithesis to the order needed to maintain our ecosystem. Note, too, Guardini's observation: "We risk the danger of losing the measure of things." How often has this been experienced in prominent people who become power-crazed and lose sight of the common good, basic values, and the ultimate meaning of life? They end up losing it, the "it" being a sense of direction. Like a ship in a storm without an anchor, they leave themselves open to the mercy of the wind.

Having asserted the need for sacred realization and all this includes, what might it look like in practice, and how

does it become a priority in meeting the ecological challenges and demands of our new millennium?

A PROPHETIC SPIRIT

We already saw one example of this practice in action from the Benedictines who viewed their work in terms of seeing all things in life as sacred vessels. Today the Rule of St. Benedict is being applied much more frequently to some of our most demanding challenges. Not only is this happening, but the works of luminaries like Thomas Merton, St. Thomas Aquinas, St. Ignatius and other spiritual writers are being applied to address serious ecological problems. For sacred realization to grow, so too must our universities, colleges, high schools, elementary schools and parishes make sacred realization an integral part of their educational efforts in ecology.

Pope John Paul II and Pope Benedict XVI have brought new theological emphasis and pronouncements to the area of ecology in their writings. Many bishops, pastors, deacons, lay leaders and theologians are working to bring about a new ecological evangelization. Columnist John Allen of *The National Catholic Reporter* placed the topic of ecology among one of the most important mega trends facing the church. Some Catholic politicians have wisely employed their Catholic tradition not only to deal with national problems, but also with the growing concerns of ecology.

Here we must ask the ultimate question: Is not this age calling for a prophetic spirit? Is it not calling for leaders and persons of influence to view the state of our ecology in the same way the prophets viewed the state of Israel? Is it not calling for them to read the signs of the times in their relationship to God's sacred creation just as the prophets read their times in relationship to God's wishes for his people? And is not the spirit of the prophets needed, a spirit that stood up against all odds to speak the truth as it was revealed to them by God?

In *The Idea of a University* John Cardinal Newman describes the essence of knowledge. "When I speak of knowledge, I mean something intellectual,

something which grasps what it perceives through the senses; something which takes a view of things; which sees more than the senses convey; which reasons upon what it sees, and while it sees; which invests it with an idea. . . . Knowledge is an acquired illumination."

One way to view this article is to see it as an investment in ideas that encompass creativity, imagination, modeling, humility and the prophetic as applied to our ecological challenges. It is an effort to reflect on inspiring luminaries with whom we have been blessed and the ageless wisdom we possess for building a hopeful future. No doubt financial investment will play a large role in creating that future. Behind all financial investments, however, is motivation: well-found reasons for risking investing. Realizing we are endeavoring to save our planet for our brothers and sisters today and for our children tomorrow is, without a doubt, a strong motivating factor for creating ecological responsibility. The inspiration of working with God in preserving God's creation and our home, however, is the strongest motivation of all.



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Linking People at Risk

WITH EARTH AT RISK

Bette Ann Jaster, O.P. and Cathy Mueller, S.L.



EarthLinks started during a walk on the beach in 1995. We were attending a Loretto Earth Network retreat in Santa Cruz, California, where we explored connections between feminism and ecology. Our reflections were universal, personal and passionate. We spoke of Earth as a living organism that invites us into relationship, into membership in a diverse and far-reaching community of land and water, of life-giving elements, of animate and inanimate inhabitants. We spoke of mystery, of Spirit. Both of us had been richly gifted through study of the works of Thomas Berry, Brian Swimme and Miriam Therese MacGillis, O.P. We knew that those who were economically poor would never have the opportunities we enjoyed.

It was clear that talking was not enough. The needs of women—especially poor women—and Earth called for action, for justice. Both of us were between jobs then, so we started dreaming. Crashing waves are conducive to creativity.

We returned to Denver and talked for weeks. Any idea is excellent when walking on the beach, but could we move dreams and visions into action now that we were back in our home settings? Bette Ann's community focused on the poor and marginalized, women and Earth. We believed we would find some funding through the Dominicans of Hope Ministry Trust and the Loretto Venture Fund. Ideas were flowing—what could we do, with whom, where, how?

We made our move, not with many answers (certainly not with a business plan) but with a vision: to respond to the basic human need for beauty, wonder and belonging. So EarthLinks was born.

Our beginning days owed much to the people we knew in a variety of agencies who served homeless persons in downtown Denver, such as St. Francis Center, a day shelter for homeless women and men sponsored by the Episcopal Diocese. To introduce EarthLinks, we started showing up on the same day every week, to meet the guests and eventually to offer nature-centered activities in a meeting room.

NATURE TRIPS: BONDING WITH OTHERS AND WITH THE NATURAL WORLD

Our first actual day trip into nature was to the local *Butterfly Pavilion*. In hindsight, it was a symbolic choice for our new organization. We did not set out with thoughts of ecopsychology. We simply knew what a difference it makes to be in nature and wanted to provide the opportunity for others. The organizing principles of the Universe are diversity, subjectivity and communion. We wondered how to make this information relevant and practical for the people with whom we were working.

Homeless adults signed up to go with us to the mountains, plains and foothills, often just to get out of town, to break up the boredom, have a good picnic lunch, get respite from the weariness, learn something new, be noticed and called by name. People stepped into our two small cars as strangers to one another and gradually they became friends or "family." People from several nationalities were always present with a myriad of life experiences. Some were very quiet, others boisterous, all usually willing to go along for a one-day "mini-vacation" from the streets. One man commented as he got out of the van after a trip, "I got in here without knowing a soul and now I'm getting out and realizing you all are nice people."

As we visited the mountain parks and hiked the trails, we saw broad vistas, tiny lichens, and learned together about aspen trees. These trees, native to Colorado, have a huge root system that links whole hillsides of golden-leaved trees through a symbiotic relationship with pines. It's all about relationships and paying attention, waking up to awareness of what surrounds and supports us. One participant says it well, "I have had a tough time financially. To get out of Denver for a day is good for my mental health. I like to learn. I am like a kid, always learning new things, satisfying my curiosity. EarthLinks connects people with people in a non-dictatorial way. The special experiences with them are critical for my soul."

On the plains we watched in awe as an eagle left its broad nest to snatch a fish out of the lake and return to the nest to feed its young. Together we were

aware that Earth and her inhabitants are not objects to be used and abused. Rather they are sacred subjects with a heart worth relating to. Spending time in quiet observation, using a spotting scope and the human eye, calms our spirits and lets a sense of peace, oneness and belonging emerge. A participant once remarked, "EarthLinks created a therapeutic community." Another said, "Being on field trips eases the pain of the situation you are going through. And when you return, life doesn't seem so menacing."

And what is a nature trip without a good picnic? We always started with a snack in the morning upon arrival at a destination. Shelters get people up so early that even if the folks had already eaten breakfast, it was a long time ago and sharing a cup of OJ and a piece of breakfast bread gave everyone energy to start the day's activities. Lunch time was rarely missed. It was a way of getting back together, being refreshed and sharing experiences, a hearty meal and a bit of humor.

One time, a man and woman met on the hike, she carrying her heavy backpack up the steep trail, afraid to leave it behind in the locked van, and he, limping due to recent foot surgery. When they sat down for lunch they discovered their common interest in poetry and pulled out and shared their own writings. Who is to say what true communion consists of, looking out at hawks or songbirds when you long for wings or being nourished by the mutuality of heart and soul? One person shared the feeling this way, "I feel so enriched having all of you in my world. You are my biodiversity."

One trip began unexpectedly. Two women from different cultures living in a transitional housing program had angry words with each other and the police were called. When we arrived with the van for a nature trip, the police were leaving. The house supervisor confirmed that the trip was still on. So, without knowing the details, yet feeling the tension, we set out to the foothills. We gradually broke the silence by sharing where we were going and what we might see. Being outside together was refreshing, freeing and healing. The winding trail with the falling snow and the leafless trees along the rushing creek added



One touch of Nature makes the whole world kin.

to the beauty of the hike. Soon all the women began talking and laughing. Their faces brightened and light came back into their eyes. The two women who had the original altercation eventually walked along talking softly together. We were reminded of something a woman from the same household had said a couple of years earlier, "EarthLinks helps us to bond together better."

BIOBOX AND BIOBUDDIES: CONNECTING KIDS AND NATURE

In 1996, we began the BioBox program to involve young people in the study of their bioregions, the section defined by the watershed and rivers in the region. We worked with teachers to

include bioregion study, earth literacy, in the regular sixth grade curriculum. The students explored where they lived, who and what else lived there—people past and present, animals, plants, cultures, historical landmarks—and shared the information with their BioBuddies.

To make it more interesting, we partnered students from the inner city with students on the rural eastern Colorado plains, smaller towns north and south of Denver, and in the mountains. City kids went out to farms—seeing tall corn and huge sugar beets for the first time, feedlots filled with cattle, hen houses where some could collect the eggs or the peacock feathers in the yard—and to the mountains to visit limestone fairy caves and take hikes with a naturalist on Devil's Backbone.

Rural students used public transportation to get around Denver, heard from a homeless adult, saw the Catholic Worker soup kitchen, toured a water treatment plant, visited a large dam in a local reservoir, went panning for gold (the main reason settlers came to Colorado in the 1850's), and explored the confluence of the South Platte River and Cherry Creek in downtown Denver. A big discovery of that day occurred when the students from Sterling, Colorado, on the eastern plains, began doing some water testing at that confluence. They realized that the area being explored, the South Platte River, was the same river that ran through their town about 125 miles away. In Denver, the river is channeled and has kayakers. In Sterling, it is wild with native grasses and

wildlife. The students made the connection—we are vitally connected by this river. As they met and spent time with one another, they also realized how connected their own lives were.

The experiential learning engaged the students. They became curious, asked questions and together found answers. One student wrote: "I discovered when you look harder, and think harder, you notice more life than you knew was there."

One goal was to tap into motivation: saving and recycling because of their relationship with Earth and their deep caring, rather than obligation. As one of the city students said: "I know more about things in my area than I used to—like the tagging. I would just go by it. Now I see that would be disrespectful to our area." Another student said, "With the BioBox Project, I learned to take time to look at, see and respect nature."

As we learned about the diversity of Earth, we also were faced with the diversity of students who came from different racial, economic, and family backgrounds. The students not only stereotyped the differing locations, they also were somewhat prejudiced about their BioBuddies. We introduced some activities to break through stereotypes and to build connections. One of the teachers commented that the students were beginning to reach out to others, becoming involved in helping other people, and in protecting and caring for the Earth and all God's creation.

GARDENING: TENDING LIVES, NURTURING SPIRITS

Gardening is a journey of the heart. Not everyone understands this. The gate was usually locked on St. Francis Center's small garden and one person "took care" of it. We decided to see if we could get involved there and entice some of the Center's guests to participate. Some did. Several of the homeless men had tangible memories fixed in their hands. As one dug a hole to plant, he described how his grandmother on the reservation had shown him how to plant. He taught us about planting the "three sisters," corn, beans and squash,

describing their relationship of growing together, depending on one another. So much of gardening is both metaphor and yet very real, shedding light on our own lives if we pay attention.

We quickly outgrew that garden and moved to an empty lot across the street. As a result of the Center's negotiations with the owners, we rented the land for a dollar a year. The owners let us tap into the building's water and the Center paid the water bill. We were both excited and overwhelmed by the size of the garden site and the hard-packed soil in this inner city landscape.

Providentially, we met a student of Horticulture Therapy at the Denver Botanic Gardens who needed a practicum and EarthLinks was a good match. We began by gathering groups from St. Francis Center to join us in sending soil samples to Cooperative Extension for testing. We were disappointed to learn it contained lead and cadmium, so we could not plant directly into the soil. Undeterred, we built raised beds.

A few men, some who had already been on nature trips, were interested. They found boards in dumpsters. They borrowed hammers and nails and began building. We found good soil and as the beds were framed, we filled them. Eventually some pallets were found for three compost bins.

Zucchini, radishes, lettuce, tomatoes, green peppers and chilies were our first crops. We especially chose cherry tomatoes and chilies so people walking through the garden could pick some to eat as they passed. Early on we decided not to enclose the garden with a fence primarily because this "Peace Garden" was by and for Denver's homeless people and we wanted them to feel welcome. We quickly learned that we were not only growing vegetables and flowers, we were growing gardeners.

We offered cold water, snacks and the FUN of gardening, and people came . . . gradually, irregularly, with curiosity and humor. We often joked with the garden participants that we don't need to "work out" if we do gardening. It is the natural way of getting healthy. One gardener told us, "In the garden, we put time and heart into it and it gives right back."

***One student wrote:
"I discovered when
you look harder,
and think harder,
you notice more
life than you knew
was there."***

The EarthLinks gardening project was making people aware of themselves and their surroundings. Our gardeners offered amazing insights: "If we take care of ourselves like a garden, we grow like a garden." People came with their burdens to talk and be enticed to get involved. One man in the garden said, "We're isolationists and you're inviting us to belong and it's going to take a while."

Gradually we added other activities that included the practical, whimsical and original. Eventually we had 39 raised beds, including a bed of roses, a couch of potatoes, a mural on our garden wall, three fruit trees, a memorial garden honoring the homeless people we knew who had died, and an arbor created for us by unemployed and handicapped young men. We learned how to build a solar oven, did it together and then cooked and served hot chili over Fritos! We held a garden party lunch for more than 250 people in the parking lot next to the garden, using the raised beds as seats. One man, a former gardener with us, arrived on his bike from Washington state and helped cook the hot dogs, glad to be "home again."

Gradually we branched out to other non-profits that ran transitional houses and overnight shelters. We encouraged their residents to become gardeners, enabling them to find new ways to tend their lives and their spirits. These folks were coping with depression, isolation, boredom and hopelessness. When invited to the garden, they would often say, "Oh you don't want me in the garden, I don't have a green thumb. I'd probably kill everything." We would respond, "But everybody can have green fingers!" They'd smile and realize that they couldn't get out of it that easily.

A miracle of sorts happened one day on a walk with the BioBox kids from two schools as we walked along the South Platte River valley. We met a local artist, Emmanuel Martinez, and asked if he would help us create a mural on our Peace Garden wall. He met with a group of us at St. Francis Center to talk about the mural. Images included a rainbow, mountain, eagle, sunrise, sunset, multicultural themes, and the city. Emmanuel

agreed to design the mural so that participants could paint it themselves.

It was majestic as the boarded windows turned into scenes of decorated flowerpots of sunflowers, cactus, corn and Polynesian flowers. An eagle held a water hose spewing spirit on the land and a rainbow rose over a mountain sunrise/sunset.

This wall became a bright light over a delightful garden in an industrial part of the city until it came to an end when the land was sold to a developer. The mural has now been painted over. With heavy and yet grateful hearts our gardeners set about digging up the plants and trees and finding new places for them among the other gardens we were growing in yards of transitional houses. Our Peace Garden found a new spot in a community garden. We learned with our homeless friends that change is the only constant we can depend on, along with the great spirit of our living God, who, like the land, surrounds and supports us.

GREENFINGERS: FRAGILE FLOWERS, ROBUST LIVES

As time went on, our participants expressed the need to earn some money. Many had no source of income or the ability to hold a regular job. Meeting this need was the beginning of GreenFingers, a microeconomic development project that made use of the flowers from our gardens to create products for sale. The money went to pay the participants.

GreenFingers began as a weekly program at St Francis Center. Guests from the Center would sign up, attend an orientation, and then come one morning a week to work. They would often come hesitantly, unsure of themselves or what was being asked of them. During orientation, they would learn basics of design and how to work with the fragile flowers. Each session began with a snack—participants always come hungry—followed by the reading of a poem or a reflection on the season giving each person a chance to speak. One of the participants, a quiet man, said that his favorite part of GreenFingers was the reflection. "Each of us is invited to speak

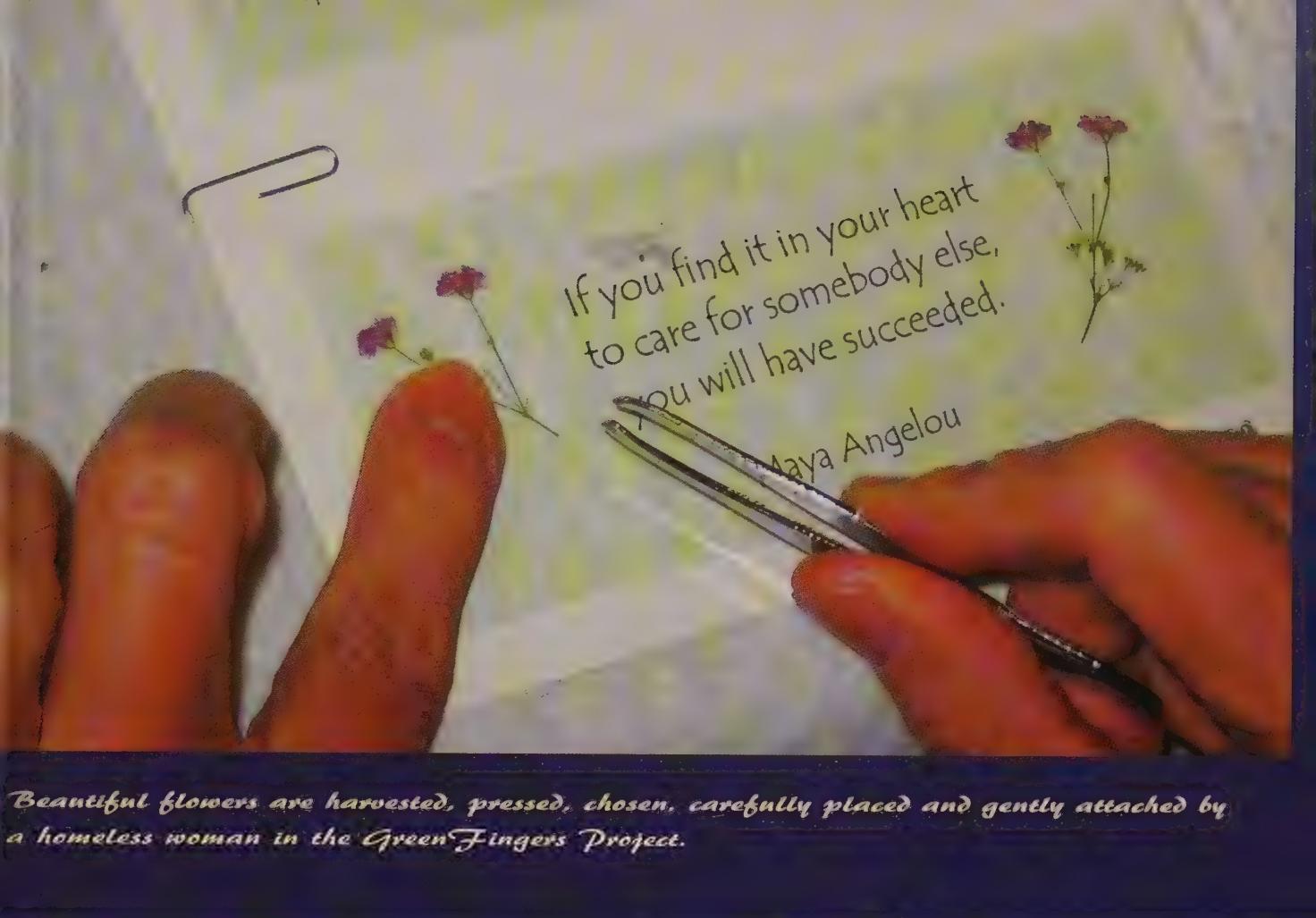
and we all listen. Since I have been homeless, nobody listens to me."

During the two-hour workshop, everyone was engaged: picking flowers in our garden, pressing them in our makeshift presses of cardboard and cinderblocks, creating bookmarks, cards, pansy bowls, and then helping with the clean up. One said, "See what happens when we work together like a team. It's better for everybody, and we get more done. I've worked places when it didn't work like that." Often there would be quiet conversation and back and forth banter as the participants called on the creative part of themselves. There was enough variety of tasks so that everyone could participate regardless of ability.

One man who stayed in a shelter talked about walking the streets of downtown Denver and noticing all the flowers growing in pots and small gardens next to the skyscrapers. Another said: "The flowers are so pretty. You see the flowers, and you can go on with your life. The flowers are therapeutic." Another commented: "Thank God for GreenFingers! It's opened my eyes to everything on Earth. I never saw the world this way before."

GreenFingers offers an experience of community while working with flowers, gourds, glue and paper. A participant said: "I am learning to value the best part of myself—and EarthLinks helps me get in touch with that. It's the most important part of myself and it makes me feel the best." For some, GreenFingers was their anchor and a place where they knew they belonged. One man who had recently moved into low-income housing—which can be a very lonely place after years in shelters—said that when he remembered that it is the day to go to GreenFingers, he smiled and felt ready for his day.

A middle-aged man, homeless for a long time, alienated his family and workers at shelters by talking too much, clinging and an inability to follow rules. He enjoyed EarthLinks nature trips—hiking, rock climbing, fresh air—and signed up as often as he could. He was also attracted to GreenFingers but struggled at first with the framework and the expectations. As time went on, he learned to harvest and press the flowers.



Beautiful flowers are harvested, pressed, chosen, carefully placed and gently attached by a homeless woman in the GreenFingers Project.

He became more centered, relaxed, aware, generous with his time, and kind. He finally did get an apartment, keeps it immaculate, does art work at home and speaks positively with his neighbors when they complain. He also speaks with deep gratitude for where he is now. "EarthLinks allows us a little time to be simple. We are exhausted in our society. We work too hard. EarthLinks is a place that provides part-time work that allows us to have time for life. It allows us the time to deal with the stuff we have to do."

GreenFingers continues to this day with fifty participants who each come one morning a week. Besides the creative work with flowers, the projects have expanded to building mason bee and bat boxes, painting water barrel drip systems, tending beehives and using the wax to make lotions and soaps as well as harvesting honey. A floral design class has resulted in paid internships for those who graduated. Also there are classes on worm composting, canning, bee keeping and sewing.

A huge part of the project is the sale of products. This happens nearly every weekend at farmers' markets, craft and holiday fairs. These sales provide about half of the money for the project and the rest comes through fundraising. Besides being necessary, we consider the sales outreach, a continuation of education about the dignity and respect everyone deserves. Some buyers are amazed that anyone who is homeless can make something so lovely.

OUR EARTHLINKS MISSION

Earth, our mentor, continues to teach us the value of each person, the needs for diversity, the strength of community. EarthLinks continues its whole Earth work as it moves toward the realization of its original vision:

- to link people on the margins of society with the mystery of the Earth
- to explore the interdependence of all creation
- to promote learning and creative ways to open hearts to the Earth

- to encourage action as advocates for the Earth.

EarthLinks continues to link people at risk and Earth at risk. For more information go to www.earthlinks-colorado.org

Sister Bette Ann Jaster, O.P., and Sister Cathy Mueller, S.L., co-founded EarthLinks in 1996 and served as co-directors for many years. They were radically changed by the people they met and Earth who led them. Bette Ann is currently a member of the Leadership Team of the Dominican Sisters of Hope. Cathy is currently president of the Sisters of Loretto/Loretto Community.



Catholic and Vegetarian

Valerie Schultz

God blessed them, saying, "Be fertile and multiply; fill the earth and subdue it. Have dominion over the fish of the sea, the birds of the air, and all the living things that move on the earth."

Genesis 1:28

It's not easy being green.

Kermit the Frog

I belong to a small minority: vegetarian Catholics.

I wonder why there are not more of us, because the two commitments strike me as perfectly matched. As a vegetarian, I believe our human "dominion" over creation does not include killing animals for food. I believe that we are called to respect the integrity of creation by nourishing ourselves more simply, with less wear and tear on the earth, and that vegetarianism is one way to stretch our resources further, to serve the common good more efficiently. As a Catholic, I am honoring the belief that all life is sacred. Not killing any living creature in order to nourish myself seems a natural, logical extension of the "seamless garment" approach of respecting all life.

Nevertheless, I have been found wanting both by other Catholics and other vegetarians. Some fellow Catholics, upon hearing I am a vegetarian, assume that I also advocate other suspect liberal positions, such as abortion on demand. For the record, I do not. I do, however, favor the abolition of the death penalty, and the installation of universal health care, so there are those red (or pinko) flags flying over my head. On the other hand, some fellow vegetarians, upon learning that I am a practicing Catholic, are disappointed that a woman they thought was enlightened is actually under the influence of the opiate of the masses (or Masses), and therefore must not be a kindred spirit. I am accustomed to being viewed as an outsider by true believers in the two camps to which I passionately belong.

Becoming a vegetarian, like becoming a Catholic, can cause tension in your life. Suddenly, you are different. You have "special needs." You have to get used to not always fitting in, to explaining your beliefs when challenged, to being noticed for your eccentricity. I am standing up for a good cause, but I sometimes think wistfully of the days when I was just like everybody else.

It was possibly the turkey that facilitated our family's transition into vegetarianism. One autumn, more than twenty years ago, we made our annual pilgrimage to the pumpkin patch at a local farm. We roamed among the squashes, looking for the perfect jack-o'-lantern shape. Beyond the pumpkin patch, in another fenced area, lived a grand and stately turkey. Our three daughters were drawn to him, liking his splayed feet, sharp beak and fleshy red wattle. They abandoned us to the pumpkin decision as they peered through the fence and spoke to the turkey. "Gobblegobblegobble," they called, and, "Hullo, Mr. Turkey!" For some foolish reason, I said, "Mmm, there's somebody's nice juicy Thanksgiving dinner."

Why did I say that? We'd been having enough trouble getting our girls to eat meat anyway. They just didn't like it, and I worried about their inadequate protein intake. Horror flashed in my daughters' eyes as they equated what I made them eat on Thanksgiving with the magnificent creature before them. "We have to rescue him!" cried our impassioned preschooler. We explained that he (or possibly she) belonged to his executioner, as though that made everything all right. Our holiday meal that year felt more like a wake. The girls refused to eat the main course, and mourned the bird's passing. Soon afterwards, we followed our hearts, bought some cookbooks, and



A Delicate Balance



became vegetarians. Twenty-three meatless years and one more daughter later, we have yet to succumb to the dire maladies predicted by my mother, among others.

One burden of going vegetarian, especially for my husband, who loves entertaining, was that our relatives no longer wanted us to host family gatherings. After all, what is Thanksgiving without turkey, Easter without ham, Super Bowl Sunday without cold cut platters? We, of course, thought we could cook creatively and treat them to lovely meatless holidays, but the guests had misgivings. We became the people who brought weird stuff to family events, who did not partake of the communal feast. We had ostracized ourselves, nutritionally speaking. By now, people are used to our vegetarian contributions to family celebrations. Sometimes they even try a bite. We also host an annual veggie potluck at our house on World Vegetarian Day in October. Although not in the same league as Thanksgiving, it has become a tradition.

Being Catholic and vegetarian can be a delicate balance. Once, as First Communion time drew near, one of my daughters was concerned that we were called to eat human flesh: surely an animal product! She needed reassurance that one could receive Communion and still be a vegetarian. I tried to explain that none of our fellow Catholics was in fact a cannibal, but transubstantiation is a tricky concept for a child who thinks concretely.

The current perception of global climate change as an environmental and spiritual challenge prompts me to put vegetarianism on the proverbial plate. The 2006 documentary that won Al Gore an Oscar, "An Inconvenient Truth," is a thoughtful and alarming look at the climate changes affecting the earth. In using his celebrity status to call attention to a global crisis, Al Gore has become the face of environmentalism: scholarly, but urgent; somber, but hopeful. As long as his face is that of a meat-eater, however, certain environmentalists assert that he lacks an important earth-saving credential.

To make this point, the in-your-face animal-rights organization People for the Ethical Treatment of Animals (PETA), wrote Al Gore a letter. In PETA fashion, it was not a private

letter, but rather a news release, stating that, topping the many inconvenient truths outlined in the documentary, the most inconvenient truth of all is that the "most effective way to fight climate change will come through diet change." Specifically, a vegan diet, which avoids all animal products, not just the ones for which the animal must be killed. Becoming a vegan, said the letter, drawing on research from the University of Chicago, is even more beneficial to the environment than trading in your Hummer for a Prius.

"Raising animals for food," said the letter, "generates more greenhouse gases than all the cars and trucks in the world *combined*." The Amazon rain forest is being destroyed in part to grow soybeans to feed the chickens whose fried parts will eventually fill KFC buckets. Now *there's* an inconvenient truth for Al Gore, and for all carnivores.

OUR PLANET, OUR SELVES

What is good for the planet is also good for the human body. A few years ago, several of my family members embarked on a three-week cleansing diet that involved eating vegan fare for one week. Much as they didn't like to admit it, they felt better during that week: less sluggish, more focused, healthier. American diets tend to be protein-heavy, and processing such a load taxes our physiological systems. Meat-eaters could survive on a vegan diet one day a month, or, better, one day a week. In these tough economic times, an international advocacy group promotes "Meatless Mondays" as a way to stretch the family food budget while being gentler to the planet. So taking this modest action to save the environment can save one's health, one's waistline, and one's finances. As emotionally difficult as giving up meat can be, neither the human body nor the earth suffers from its absence; in fact, both are more likely to thrive without it.

I know that what we eat is an emotional issue. We equate our food choices with so many things besides our caloric intake. Food is tangled up in comfort, identity, culture, habit, religion, family, society, celebration and addiction. Food is intensely



personal in its selection and in its consumption, and nourishes more than the physical human organism. Meat, in particular, is a sign of wealth, of well-being, of satiety, even of patriotism: what meal better precedes American apple pie than meat-and-potatoes?

But a meatless diet makes perfect sense, especially in a world that can easily feed itself without resorting to the slaughter of animals, and without further environmental detriment. As our global future becomes more insecure and ever more fraught with problems, we can't have it both ways: we can't say we care about our environment and yet continue to behave in ways that harm it. The inconsistency reminds me of the people I recently overheard at a restaurant, condemning Michael Vick's infamous dog fighting ring while they were gnawing on someone's ribs, and tearing flesh from someone's leg. They were upset about the mistreated dogs, but what about the unfortunate pig on that night's menu? What about the poor chicken? We love our dogs, but we raise and kill millions of animals for food that is actually not good for us. As Mr. Spock of *Star Trek* would say, that is illogical. And of course, the enlightened Vulcans, the most logical race ever imagined, are vegetarians.

CHANGING BEHAVIORS

In 2001, the United States Conference of Catholic Bishops issued a statement called *Global Climate Change: A Plea for Dialogue, Prudence and the Common Good*. A twelve-page document that examines Catholic social teaching in relation to climate change, it has this to say about the stewardship of the planet bestowed by God:

True stewardship requires changes in human actions—both in moral behavior and technical advancement. Our religious tradition has always urged restraint and moderation in the use of material goods, so we must not allow our desire to possess more material things to overtake our concern for the basic needs of people and the environment. . . . Technological innovation and entrepreneurship can help make possible options that can lead us to a more environmentally benign energy path. Changes in lifestyle based on traditional moral virtues can ease the way to a sustainable and equitable world economy in which sacrifice will no longer be an unpopular concept. For many of us, a life less focused on material gain may remind us that we are more than what we have. Rejecting the false promises of excessive or conspicuous consumption can even allow more time for family, friends, and civic responsibilities. A renewed sense of sacrifice and restraint could make an essential contribution to addressing global climate change.

Eleven years later, sacrifice is still an unpopular concept, but the years have added a sense of urgency to these excellent suggestions. I must note, however, that reducing or eliminating the consumption of meat did not make the bishops' list of recommended, sustainable ways to go green.

A potential pitfall of a vegetarian lifestyle is the temptation to treat the body as God rather than as a temple of God: "Do you not know," asks St. Paul in his First Letter to the Corinthians, "that you are God's temple and that God's spirit dwells in you? . . . God's temple is holy, and you are that temple"

(3:16–17). Of course, in our society, we routinely desecrate the temple: we chop up and rearrange our bodies to make them more attractive. We inflate our breasts and tuck our tummies and stretch our wrinkles. We overeat, we starve ourselves, we pump up on steroids. We abuse our bodies with little thought for the God who dwells within. Perversely, though, we can arrive at a point where we worship the temple of the body, putting physical, ephemeral needs above everything else, and forget about God. When we are vegetarian zealots, food philosophers, what we eat can become a religion unto itself. Without the balance of body and spirit, our world becomes too narrow. Worst of all, we are tempted to retreat from the greater community, the other temple referred to by Paul, by focusing only on ourselves.

In the era of climate change, the personal is political. The dietary choices we make, along with all other consumption of resources, have serious and evident consequences. When our concerns are small and self-centered, when we do not bind the local to the global, or the physical to the spiritual, we work against the common good. If we are to be God's true temple, we need to be built up, cleaned up and smartened up.

The growing Catholic awareness of the issues of climate change, environmental fragility, and spiritual responsibility gives me hope that we can dust off the old song and sing about how "the times, they are a-changing." A parish I recently visited advertised a "Green Bible" for sale in the parish gift shop. "The Green Bible encourages people to see God's vision for creation and helps us in healing and sustaining it," enthused the blurb in the bulletin. The Society of Jesus recently published a special report on ecology called "Healing a Broken World," which calls on Jesuits worldwide to "cast a grateful look on creation, letting our hearts be touched by its wounded reality and making a strong personal and communal commitment to healing it." The report asks Jesuits to evaluate their own life choices in light of social justice and environmental concerns, and to promote local and global solutions that are practical, spiritual, ethical and green. Even the Pope mentions "sudden climatic changes" as one contributor to global food shortages in his 2011 message on World Food Day. Increasingly, we grasp that the thoughtful stewardship of all creation is a calling from God. Conscious care for the earth is intrinsic to caring for each other.

We humans are hungry for truth, for sacred connection, for what is holy, for what lasts. The way we feed our bodies can also feed our souls. We Catholics will know that true conversion of heart has taken place when the Knights of Columbus hold a Tofu Fry for charity.



Valerie Schultz is a freelance writer and a weekly columnist for *The Bakersfield Californian*.



THE TRANSPARENCE

he poem included here, in admiration of granite, leads me to consider the more general term “rock.” We use it every so often for someone special, to indicate their solidity, stability. So and so is a Rock of Gibraltar. A nuance of protection enters also into this metaphor of rock; we can take refuge behind it or upon it.

This exactly was the sense that the Hebrew people had of God. “My rock,” the psalmist begs, “do not be deaf to me” (Psalm 28:1). “The Lord is “the rock of our salvation,” says another psalm (95:1); and yet another, “a rock of refuge” (31:3). “Trust in the Lord forever,” Isaiah urges; “the Lord is an eternal Rock” (26:4). The years of the Exodus, when the Law was given to Moses on Mount Sinai, seem to have embedded this image in Jewish piety as a rich, descriptive image of God.

My own idea of the greatness of God draws upon the immensities of the Sierra Nevada in California. In the late 1950s, as a young Jesuit teaching at the minor seminary in Fresno, the capital of Big Agriculture, what refreshed me was our occasional forays into the granite reaches of Kings Canyon, Sequoia Park, or the high-country reservoirs and lakes. It was a region somehow above earth, of breathable air, vivid sky (known in the catalogues of paint as Sierra blue), and the reddish brown of cedars and sequoias. The immense girth, height and age of the sequoias overwhelms one.

In my forties and fifties, the summers allowed back-packing into certain stretches of the Sierra, above all the back country of Yosemite Park. How many bright spots these expeditions offered: scooping water from streams with the Sierra cup, reading around a campfire from John Muir’s *The Mountains of California*, gazing up in the evening glow at the last touches upon what Muir called “the Mountains of Light.”

What still affects me of the Sierras is its sweep of granite, whether snow-capped or bare. Anyone driving up to Reno from Sacramento rises onto a broad display of these contours,

glacially carved. Even a roadside piece of granite impresses. Nothing is more solid than that glittering mass of compounded minerals—quartz, feldspar, magnesium. Its quietude is so deceiving. All of this solidity was once seething magma below the crust of earth, thrust upwards explosively into the huge block we now call the Sierra Nevada, a few hundred miles long and tilted from the east.

What a blessing, what an image of the divine, what a locus of strengthening we have in our various chains of “rockies.” Yet their tenure is precarious. The Sierra in California was denuded of 60% of its giant sequoias, some of them 2,000 years old, before their groves were set aside by edict. Streams have been cluttered with rock detritus from the water-cannon blasts of placer mining. Large patches of national forest are still given to grazing. Who knows what would be left were it not for the initiatives of conservation, begun by President Lincoln when he set aside Yosemite Valley, and carried on today against all the impulses of exploitation.

The life of the spirit can draw profitably from granite. It is anything but mute and obtuse. Pierre Teilhard de Chardin, the Jesuit paleontologist, was eloquent on behalf of earth. Even as a boy he felt a bond to the earth that would continue to motivate him and flower in his “Hymn of the Universe” (*Hymne de l’Univers*) and “Mass upon the World” (*Messe sur le Monde*). Contemporary science has become more and more aware of the formative process, over eons, of our rocky planet with its life-giving abundance of water. Mineral trace elements were in the chaotic swirl from which our sun was formed and its planets spun off. We can attribute this whole process to the “self-organizing dynamics” of the universe, God’s universe, and its “intrinsic creativity” (*The Universe Story*, Brian Swimme and Thomas Berry, 1992).

Teilhard de Chardin propounded not just respect for the earth but reverence for it. For him the universe as a whole,



OF ROCK

James Torrens, S.J.

including the rock of earth, is transparent with God, ablaze with God. He would have us all be contemplative of this reality and be active consciously as co-creators with Christ of the earth as it is called to be, ready for its final stage, "a new heaven and a new earth" (Revelation 21:1). Teilhard de Chardin insisted that the Christ Project, as he proposed it, was adumbrated long ago by the author of Colossians. In Christ, says Colossians, "were created all things in heaven and on earth, the visible and the invisible" (1:16). "In him all things hold together" (1:17).

The human drama, centered upon the death and resurrection of Jesus, affects and is profoundly affected by its physical component and all its palpable surroundings. Francis of Assisi, addressing in utter simplicity "our brother the wind," "our brother fire," "our sister water," recognized this instinctively. His Canticle includes, of course, "mother earth"—Pacha Mama, the Incas called it.

We urge each other to build solidly whatever we construct. Jesus did the same at the end of the Sermon on the Mount, and his rock foundation was to be his own teaching just unfolded. And we remember with gratitude that Jesus himself, conferring the name of Kephas, Peter, or "rock" on Simon the fisherman, was bestowing the divine solidity on his Church, his own Mystical Body and the vehicle of the Kingdom of God.



ADHERENCE

**Lichen, you love your foothold upon granite,
those metals molten in the deep earth
spewed up and frozen into stone.**

**We find you speckling the splotchy face,
lichen, when we look closely,
orange, old gold and the palest lime.**

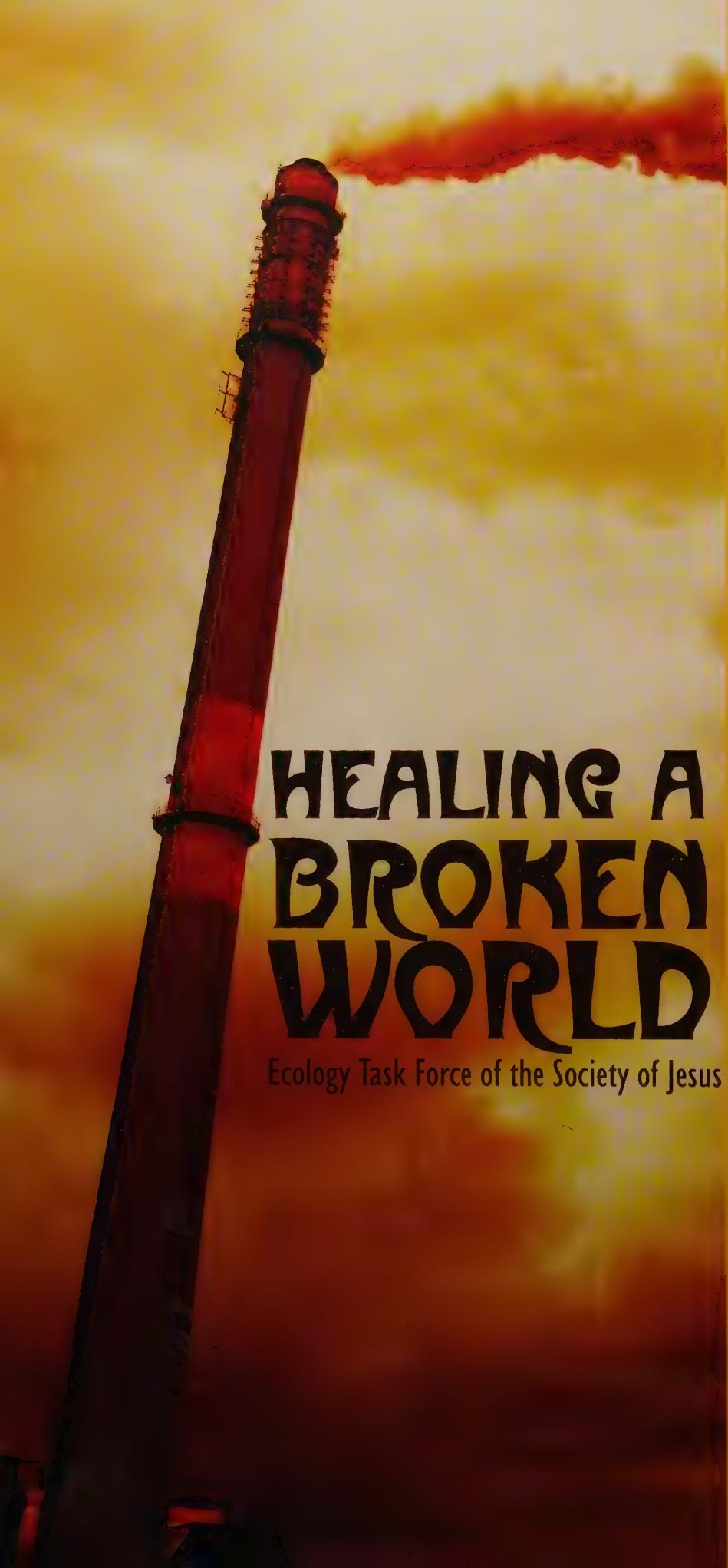
**How impossible of lifting, lichen,
are the roadside chunks, strewn boulders,
you are so quick to fasten on.**

**Lichen, you're glued to the master rock.
Bravo, my compliments, you instruct me,
for to that Rock I'm clinging.**

**Rock of Immensity, the winter-wary
shelter in you. O my Defense,
secure me to you like lichen.**



Father James Torrens, S.J., lives in Fresno, California, at the pastoral center of the diocese, and serves in ministry to the diocese.



In February 2011 Promotio Iustitiae, the journal of the Social Justice and Ecology Secretariat of the General Curia of the Society of Jesus, published a special report on Ecology entitled "Healing a Broken World." The report was the work of the Ecology Task Force. The document was developed from July-November 2010 by experts, both Jesuit and lay, from all the Conferences.

While intended for members of the Society of Jesus and their collaborators, there is much of value to be found in it for any Christian concerned about the state of the environment. Selections from the report appropriate for this issue of **HUMAN DEVELOPMENT** are excerpted below with the kind permission of the secretariat. The entire report may be accessed at: <http://www.sjweb.info/sjs/pjnew/>.

EDITORIAL

The deterioration of the environment as a result of human activity has taken on a decisive importance for the future of our planet and for the living conditions of coming generations. We are witnessing a growing moral consciousness regarding this reality.

The Church, and especially the two most recent Popes, have been insisting on the need for us to collaborate in the efforts to preserve the environment, and thus to protect creation and the poorest populations, who are those most threatened by the consequences of environmental degradation.

The present document seeks to be one more aid in this long journey, which requires sincere dedication on our part. . . . Its main message, though, is one of hope: we still have time to save this wounded creation. It is now up to us to make our own small contribution.

Patxi Álvarez, S.J.
Director, Social Justice and
Ecology Secretariat

VISION

The deepening of our faith experience in God's creative gift of life calls for transformative change in the way we respond to the urgent task of reconciliation with creation. Creation, the life-giving gift of God, has become material, extractable and marketable. Full of paradoxes, the world confuses and accuses us, but holds out, at the same time, encouraging signs. There is

HEALING A BROKEN WORLD

Ecology Task Force of the Society of Jesus

ear, turmoil, suffering and despair, but also expressions of hope and trust. All of us are responsible, some of us more than others; all of us suffer the effects, some more than others. Justified by technological prowess and consumed by greed, too many human beings continue to dominate and rape nature in the advance towards "progress;" too few reckon with the consequences of our actions.

Rational and technical answers to the physical and biological challenges of his world dominate our experience, blunting our sensitivity to the mystery, diversity and vastness of life and the universe. The spiritual depth of communion with nature is banished from our experience by an excess of rationality, but if we want to respond to the searching questions of the women and men of our time, we need to go deeper and increase our communion with creation. We have much to learn in this from others so that their experience makes us draw deeper from our own faith; we need to know on our pulse the hope and healing sought by so many in the world today, especially those who are young or vulnerable and in need of peace across the land.

Today, more than ever, we need to recognize Christ in suffering and ugliness, in the depth of all things as in the Passover, reconciling creation through Himself and renewing the Earth. Though powerless, we draw strength through Christ's presence and with dignity experience meaning and love. "Seeing God in all things" calls us into the mystical relation with all creation. The wisdom of God and the new triptych explaining our mission of reconciliation¹—these give us strength to listen to all people and to work with them. We recognize the wounded and broken world and humbly acknowledge our part; yet this is an invitation to respond, to be a healing presence full of care and dignity in places where the truth and joy of life are diminishing.

The degrading of the environment through unsustainable energy consumption and the threat of diminishing water and food are consequences being played out in global society today: the Aral Sea, Aceh, Darfur, Katrina, Copenhagen, Haiti and the Gulf of Mexico. Competing "goods" (for example, national energy development and displacement of local subsistence) call

for deeply informed discernment. The exponential rise in population densities, from today's 6.8 billion to 9 billion projected by the year 2050, exacerbates both the demand on natural resources and the production of waste. From the right to develop down to the ethical call for reduction—it is all a huge challenge for humankind. There are few easy answers; we are called to investigate how we must live and bear witness. Contemplating the signs of the times and engaging in discernment of the mission, we must courageously explore new ways of living ecological solidarity.

The struggle for dignified living stretches across a socioeconomic abyss—from utter deprivation at one end to abusive consumption at the other. The range covers chronically impoverished, marginalized, indigenous peoples, migrants and displaced people, all of them struggling to meet basic needs and security; it includes those searching for a better life and a promise of progress, and those craving consumerism. Where many are deprived of food, some must reduce consumption. Dignified yet humble, we all need justice as we seek for peace and to "live the kingdom."

Our charism and vocation call us to renew relations, to challenge intellectual and spiritual commitment and contemporary formation, to profess a deep engagement with creation and learn from the Book of Nature to be co-creators sharing in the fullness of life. Through healing centers we need to identify and act with lay collaborators and social movements, locally, regionally and universally, connecting and participating in the broader search for respect, responsibility and accountability for the environment.

The challenge is both new and old, and addresses all ministries. The document takes this diversity seriously, speaks of personal conversion, appeals to the mind as well as to the heart, to individuals and institutions, Conferences and Provinces, and addresses itself to all sectors: theological, spiritual, pastoral, social, educational, intellectual and scientific. We need to proceed in dialogue with the world, with all religions and with those committed to environmental justice. This is a crucial dialogue at the very frontier of the ecological sustainability of all life (par. 5-11).

THE RESPONSE OF THE CHURCH: CATHOLIC SOCIAL TEACHING

Care for the environment is, first and foremost, based on recognizing the environment as a true good. Psalm 104, a sustained hymn to the glories of creation, leads to praise of the Creator ("I will sing to the Lord as long as I live..."). Our primary human response to the good is to appreciate it, which is a contemplative response. Without such appreciation, any ethical duties attributed to us will seem secondary, or even oppressive. Secondly, this intrinsic good is a common good. "The goods of creation belong to humanity as a whole."² The principle of solidarity thus applies to the environmental no less than to the social field³, for environmental damage is also a social evil; in particular, it harms the poor who have the least chance of evading its consequences, whereas the products of environmental exploitation go overwhelmingly to richer countries and richer people. *Caritas in Veritate*⁴, reflecting Catholic Social Teaching as a whole, insists that justice and the service of the common good lie at the heart of what it is to love. It applies to the environment the principle of the universal destination of the goods of creation to the principal dimensions of human life: commerce, the international political order, and each person's choices, often expressed through civil society.

The appreciation and service of this common good calls us to responsibility.

Human beings legitimately exercise a responsible stewardship over nature, to protect it, to enjoy its fruits and to cultivate it in new ways . . . so that it can worthily accommodate and feed the world's population. . . . We [have a] grave duty to hand the Earth on to future generations in such a condition that they too can worthily inhabit it.⁵ From a Judeo-Christian perspective, there is a "covenant between human beings and the environment, which should mirror the creative love of God." In other words, we assume an obligation that follows from faith to sustain creation and even enhance it (par 44-45).

THE LINKAGES BETWEEN RECONCILIATION AND JUSTICE

In the recent past the concept of reconciliation has assumed greater significance in the field of conflict resolution.⁶ We need to start asking the following question: is justice possible without reconciliation? In other words, in a reconciliation process, how do we handle past injustices so that they are neither forgotten nor festering?

The term “reconciliation” means literally a call-to-be-again-together; a call addressed to two parties in conflict, to two enemies, to develop a new relationship.⁷ Reconciliation, theologically considered, is the restoration of broken relationships between God and people.⁸ God initiates this process of restoration, humans respond to God's initiative through faith, and the outcome is the rebuilding of the human community as a new creation.⁹ For Christians, therefore, hope for reconciliation is closely linked with faith in Christ's saving work among us.¹⁰ It is to be noted that an excessively spiritual interpretation of reconciliation with God has often led to an individualistic and subjective approach to life.¹¹

God + Human beings → Rebuilding the human community as a new creation

The term “establishing right relationships” is equivalent to establishing relationships based on justice.¹² To understand the relationship between the terms “reconciliation” and “justice” the term “justice” should be understood in its widest sense. The word “justice” includes the three dimensions of justice: commutative justice requiring reciprocal relations among individuals or private groups established on a basis of equality; retributive justice requiring compensation for injustices committed; and finally, restorative justice.

Expanding the relationship between reconciliation and justice means that reconciliation cannot be strictly reduced to a spiritual reality without any change in the actual hard realities. Reconciliation extends beyond one-on-one interpersonal relationships to the political realm by initiating restorative justice. Restorative justice is forward looking—it operates from the perspective of “anticipatory justice.” It seeks the future reconstruction of a community by repairing relationships

and reintegrating unjustly excluded persons into civic life. It guarantees that all members of society can actively participate in social life, both by contributing to the common good and sharing in the common good to the degree necessary to protect their human dignity.¹³ Reconciliation, therefore, in no way suggests a lessening of the commitment to justice. Neither does it advocate premature forgiveness. Reconciliation requires justice, though it can go beyond justice in the granting of forgiveness¹⁴ (par 50–53).

DIFFERENT ACTORS IN THE ECOLOGICAL CRISIS

The hard facts reveal that the right to life of many poor and marginalized communities is at stake in different parts of the world, particularly in developing countries. If the ultimate goal of reconciliation is to build a new covenantal relationship with creation based on the principle of restorative justice, but not without losing sight of retributive justice, we need to ask the question: what are the challenges here and now? How can we protect, sustain and promote the land-species-human-planet-universe connectivity as comprising dynamic, transformative life processes? The basic realization is that creation “suffers” the plundering of ecosystems, and has been described as the “new poor” crying out for our attention.¹⁵ We need to distinguish the role played by various actors in this ecological crisis.

We start with the group of people at the margins, the poor. There are two great challenges in the 21st century: overcoming poverty and managing climate change, not separate aspects but linked in mutual interdependence.¹⁶ The mechanisms that ultimately link human development and poverty reduction to climatic changes are now more evident, showing the links with employment and livelihoods, health, gender and security. To give just one example: rural women are heavily dependent on the natural environment for their livelihoods, which are directly affected by climate-related damage or scarcity of natural resources.

The second type of people comprises those who live at the center, the rich. People at the center are those who add to the ecological crisis through excessive consumption and huge production of waste. The ferocious demand

for food and other resources has led to dramatic changes. The world is rapidly converting nature into agricultural land to meet growing demands, draining rivers of all water to produce food, and polluting water with pesticides and fertilizer.¹⁷

People of the third type comprise the growing middle class, the neo-rich. Liberalization of the economy expanded the horizon of new opportunities and ushered in higher standards of living to those who could afford it. In India, for example, the social and political changes of the 1980s and 1990s, in which the middle classes were such significant actors, were associated, too, with a shift in their values.¹⁸ The phenomenal growth of the middle class with its clamor for more is seen in many of the developing countries. The World Bank estimates that the global middle class is likely to grow from 430 million in 2000 to 1.15 billion in 2030. The geographical distribution of this middle class is striking. In 2000, developing countries were home to 56 per cent of the global middle class, but by 2030 that figure is expected to reach 93 per cent. China and India alone will account for two-thirds of the expansion, with China contributing 52 per cent of the increase and India 12 per cent¹⁹ (par 54–57).

MITIGATION, ADAPTATION AND SOCIAL CONTRACT AS TRANSFORMATIVE AGENDA

In dealing with restorative ecological justice we take up the concepts of mitigation, adaptation and social contract. In the global North, mitigation is the primary and much needed approach to addressing climate change. Mitigation is dependent upon technological responses that reduce the sources of carbon production, particularly from the energy sector, and on finding alternatives that are less ecologically damaging.²⁰ Deliberate or unintentional adaptation is the adjustment of natural or human systems to make them less harmful, or the creation of opportunities that are beneficial in response to actual or expected climatic events and their effects. Adaptation of natural systems includes management of forests, watersheds, habitats, agriculture, fisheries and marine culture options. Adaptation of human systems includes energy and

communications, pollution and waste management, infrastructure and transport, micro-finance and social security, early warning systems and disaster response.

Some communities and peoples have entered into social contracts that capture the distinctive local cultural relationship with the environment. This contract is a relationship founded upon reciprocity and the respect of a local community for nature. In this approach, community is bound by its understanding of, as well as responsibilities to, the natural environment. This cultural reference provides a working foundation for formal agreements with government and within the broader context of civil society (par 58–59).

ENDNOTES

General Chapter 35, D 3, nos. 12, 18. Benedict XVI, World Day of Peace Message 2010, 7.

Pontifical Council for Justice and Peace, *Compendium of the Social Doctrine of the Church*, 2004, Roma: Libreria Editrice Vaticana, 475–76. *Caritas in Veritate*, 6–7.

Caritas in Veritate, 50.

Temporary peace agreements in a war situation have not produced the desired results for the reason that on many occasions the peace agreements had no inbuilt consideration for reconciliation. Many times peace agreements are orphaned (Fen Osler Hampson, *Nurturing Peace: Why Peace Settlements Succeed or Fall*, 1996, Washington: United States Institute of Peace). That is, the parties reach an agreement that stops the fighting but does little to take the parties toward what Kenneth Boulding calls stable peace, which can only occur when the issues that gave rise to the conflict in the first place are addressed to the satisfaction of all (*Stable Peace*, 1978, Austin: University of Texas Press). On the other hand, some argue that reconciliation is neither possible nor desirable between unequal parties. It is feared that in such situations, there is a potential danger that the strong will prevail over the weak and determine the line of future action without understanding the genuine concerns of the weak and thus deepen the conflicts further.

7. In the Ignatian and Biblical tradition we are always reminded that these new relationships, these acts of reconciliation, need to be established with those different from us, with those estranged from us, with “foreigners.”
8. “In Christ God was reconciling the world to himself, not counting their trespasses against them, and entrusting the message of reconciliation to us” (2 Corinthians 5:19).
9. Robert J. Schreiter, *The Ministry of Reconciliation: Spirituality and Strategies*, Maryknoll, NY: Orbis Books, 1998, 13–19.
10. According to Charles Hauss, reconciliation includes four critical components identified by John Paul Lederach as truth, justice, mercy, and peace (Reconciliation, <http://msct.beyondintractability.org/essay/reconciliation/>).
11. David Hollenbach S.J., “Reconciliation and Justice: Ethical Guidance for a Broken World,” *Promotio Iustitiae*, 103, 2009/3.
12. It is enlightening to see how the term “right relationship” used in Decree 3 has been translated, for example in Italian, French and Spanish. As an example, the text, “In heeding the call to restore *right relationships* with creation,” has been translated into Spanish as “*Para escuchar, una vez más, el llamamiento a promover relaciones justas con la creación*” (D 3, no. 34).
13. David Hollenbach, ibid. Recalling the example of the Truth and Reconciliation Commission of South Africa, Hollenbach emphasizes that restorative work could begin only when the gravest injustices of apartheid had already been ended by the protection of the fundamental rights guaranteed by the new South African Constitution and democratic institutions in place to ensure that injustice will not return.
14. From a broader political perspective it must be clearly stated at the outset that restorative justice, that is, restoring or renewing social unity, is not merely the result of amnesties that allow perpetrators to continue their oppression, nor a call to suppress the truth of what has happened. Reconciliation can only happen when injustices cease and the truth is told.
15. Leonardo Boff, *Cry of the Earth, Cry of the Poor*, Maryknoll, NY: Orbis Books, 1997.
16. Stern, N. (2010). *Gérer les changements climatiques, promouvoir la croissance, le développement et l'équité*, Conférences at the Collège de France. http://www.college-de-france.fr/default/EN/all/ni_sté/indr_ex.htm The multidimensional nature of climate change, far beyond the environmental impacts, shows how it hits the most vulnerable, especially the poor in the developing world, not only because they are dependent on the very resources impacted, but also because they have far less capacity to protect or adapt themselves.
17. In developing countries agriculture accounts for 70 to 90 percent of available freshwater supplies. Animals fed on grain need more water than grain crops. In tracking food animal production from the feed through to the dinner table, the inefficiencies of meat, milk and egg production range from a 4:1 energy input to protein output ratio up to 54:1. The United States could feed 800 million people with grain that livestock eat, a 1997 Cornell University study found. <http://www.news.cornell.edu/releases/Aug97/livestock.hrs.html>.
18. Pavan K. Varma laments that the fact that the ideals of service gave way to ruthless individualism, austere ways of life came to be replaced by consumerism, and the values of the middle class came, ironically, to resemble those reflected in the self-seeking actions of the politicians they so much despised (*The Great Indian Middle Class*, Penguin Books, India).
19. <http://knowledge.wharton.upenn.edu/article.cfm?articleid=2011>.
20. Given that the change is on-going with no mitigation of carbon production that will turn back the climate and immediately reduce the risks, the need for adaptation becomes crucial. In the present context we are not justified in thinking that the more mitigation there is, the less the need to adapt. There is a need for immediate adaptation, but also a fundamental change in patterns of consumption and comfort levels designed by the developed world.



The Earth Charter

The writing of the Earth Charter took more than six years (1994-2000) and involved consultation with governments, NGOs, civic organizations and religious groups around the world. The earth charter was first proposed by United Nation's Secretary General Boutros Boutros Ghali in 1992 at the Rio de Janeiro Earth Summit. The task was taken up jointly by Canadian Maurice Strong, who had been the chairman of the Earth Summit, and Mikhail Gorbachev, who was then the former presi-

dent of the Soviet Union, working through organizations they each founded (the Earth Council and Green Cross International respectively). Together they created the Earth Charter Commission, which was charged with the task of creating the document that would reflect a global consensus on values and principles for a sustainable future. The Commission continues to serve as the steward of the Earth Charter text. (Wikipedia: "The Earth Charter" and "The Earth Charter Initiative")

PREAMBLE

We stand at a critical moment in Earth's history, a time when humanity must choose its future. As the world becomes increasingly interdependent and fragile, the future at once holds great peril and great promise. To move forward we must recognize that in the midst of a magnificent diversity of cultures and life forms we are one human family and one Earth community with a common destiny. We must join together to bring forth a sustainable



global society founded on respect for nature, universal human rights, economic justice, and a culture of peace. Towards this end, it is imperative that we, the peoples of Earth, declare our responsibility to one another, to the greater community of life, and to future generations.

EARTH, OUR HOME

Humanity is part of a vast evolving universe. Earth, our home, is alive with a unique community of life. The forces of

nature make existence a demanding and uncertain adventure, but Earth has provided the conditions essential to life's evolution. The resilience of the community of life and the well-being of humanity depend upon preserving a healthy biosphere with all its ecological systems, a rich variety of plants and animals, fertile soils, pure waters, and clean air. The global environment with its finite resources is a common concern of all peoples. The protection of Earth's vitality, diversity, and beauty is a sacred trust.

THE GLOBAL SITUATION

The dominant patterns of production and consumption are causing environmental devastation, the depletion of resources, and a massive extinction of species. Communities are being undermined. The benefits of development are not shared equitably and the gap between rich and poor is widening. Injustice, poverty, ignorance, and violent conflict are widespread and the cause of great suffering. An unprecedented rise in human population has

We must realize that when basic needs have been met, human development is primarily about being more, not having more.

overburdened ecological and social systems. The foundations of global security are threatened. These trends are perilous—but not inevitable.

THE CHALLENGES AHEAD

The choice is ours: form a global partnership to care for Earth and one another or risk the destruction of ourselves and the diversity of life. Fundamental changes are needed in our values, institutions, and ways of living. We must realize that when basic needs have been met, human development is primarily about being more, not having more. We have the knowledge and technology to provide for all and to reduce our impacts on the environment. The emergence of a global civil society is creating new opportunities to build a democratic and humane world. Our environmental, economic, political, social, and spiritual challenges are interconnected, and together we can forge inclusive solutions.

UNIVERSAL RESPONSIBILITY

To realize these aspirations, we must decide to live with a sense of universal responsibility, identifying ourselves with the whole Earth community as well as our local communities. We are at once citizens of different nations and of one world in which the local and global are linked. Everyone shares responsibility for the present and future well-being of the human family and the larger living world. The spirit of human solidarity and kinship with all life is strengthened when we live with reverence for the mystery of being, gratitude for the gift of life, and humility regarding the human place in nature.

We urgently need a shared vision of basic values to provide an ethical foundation for the emerging world community. Therefore, together in hope we affirm the following interdependent principles for a sustainable way of life as a common standard by which the conduct of all individuals, organizations, businesses, governments, and transnational institutions is to be guided and assessed.

PRINCIPLES

I. RESPECT AND CARE FOR THE COMMUNITY OF LIFE

1. Respect Earth and life in all its diversity.

a. Recognize that all beings are interdependent and every form of life has value regardless of its worth to human beings.

b. Affirm faith in the inherent dignity of all human beings and in the intellectual, artistic, ethical, and spiritual potential of humanity.

2. Care for the community of life with understanding, compassion, and love.

a. Accept that with the right to own, manage, and use natural resources comes the duty to prevent environmental harm and to protect the rights of people.

b. Affirm that with increased freedom, knowledge, and power comes increased responsibility to promote the common good.

3. Build democratic societies that are just, participatory, sustainable, and peaceful.

a. Ensure that communities at all levels guarantee human rights and fundamental freedoms and provide everyone an opportunity to realize his or her full potential.

b. Promote social and economic justice, enabling all to achieve a secure and meaningful livelihood that is ecologically responsible.

4. Secure Earth's bounty and beauty for present and future generations.

a. Recognize that the freedom of action of each generation is qualified by the needs of future generations.

b. Transmit to future generations values, traditions, and institutions that support the long-term flourishing of Earth's human and ecological communities.

In order to fulfill these four broad commitments, it is necessary to:

II. ECOLOGICAL INTEGRITY

5. Protect and restore the integrity of Earth's ecological systems, with special concern for biological diversity and the natural processes that sustain life.

a. Adopt at all levels sustainable development plans and regulations that make environmental conservation and rehabilitation integral to all development initiatives.

b. Establish and safeguard viable nature and biosphere reserves, including wild lands and marine areas, to protect Earth's

fe support systems, maintain biodiversity, and preserve our natural heritage.

c. Promote the recovery of endangered species and ecosystems.

d. Control and eradicate non-native or genetically modified organisms harmful to native species and the environment, and prevent introduction of such harmful organisms.

e. Manage the use of renewable resources such as water, soil, forest products, and marine life in ways that do not exceed rates of regeneration and that protect the health of ecosystems.

f. Manage the extraction and use of non-renewable resources such as minerals and fossil fuels in ways that minimize depletion and cause no serious environmental damage.

6. Prevent harm as the best method of environmental protection and, when knowledge is limited, apply a precautionary approach.

a. Take action to avoid the possibility of serious or irreversible environmental harm even when scientific knowledge is incomplete or inconclusive.

b. Place the burden of proof on those who argue that a proposed activity will not cause significant harm, and make the responsible parties liable for environmental harm.

c. Ensure that decision making addresses the cumulative, long-term, indirect, long distance, and global consequences of human activities.

d. Prevent pollution of any part of the environment and allow no build-up of radioactive, toxic, or other hazardous substances.

e. Avoid military activities damaging to the environment.

7. Adopt patterns of production, consumption, and reproduction that safeguard Earth's regenerative capacities, human rights, and community well-being.

a. Reduce, reuse, and recycle the materials used in production and consumption systems, and ensure that residual waste can be assimilated by ecological systems.

b. Act with restraint and efficiency when using energy, and rely increasingly on renewable energy sources such as solar and wind.

c. Promote the development, adoption, and equitable transfer of environmentally sound technologies.

d. Internalize the full environmental and social costs of goods and services in

the selling price, and enable consumers to identify products that meet the highest social and environmental standards.

e. Ensure universal access to health care that fosters reproductive health and responsible reproduction.

f. Adopt lifestyles that emphasize the quality of life and material sufficiency in a finite world.

8. Advance the study of ecological sustainability and promote the open exchange and wide application of the knowledge acquired.

a. Support international scientific and technical cooperation on sustainability, with special attention to the needs of developing nations.

b. Recognize and preserve the traditional knowledge and spiritual wisdom in all cultures that contribute to environmental protection and human well-being.

c. Ensure that information of vital importance to human health and environmental protection, including genetic information, remains available in the public domain.

III. SOCIAL AND ECONOMIC JUSTICE

9. Eradicate poverty as an ethical, social, and environmental imperative.

a. Guarantee the right to potable water, clean air, food security, uncontaminated soil, shelter, and safe sanitation, allocating the national and international resources required.

b. Empower every human being with the education and resources to secure a sustainable livelihood, and provide social security and safety nets for those who are unable to support themselves.

c. Recognize the ignored, protect the vulnerable, serve those who suffer, and enable them to develop their capacities and to pursue their aspirations.

10. Ensure that economic activities and institutions at all levels promote human development in an equitable and sustainable manner.

a. Promote the equitable distribution of wealth within nations and among nations.

b. Enhance the intellectual, financial, technical, and social resources of developing nations, and relieve them of onerous international debt.

c. Ensure that all trade supports sustainable resource use, environmental protection, and progressive labor standards.

d. Require multinational corporations and international financial

organizations to act transparently in the public good, and hold them accountable for the consequences of their activities.

11. Affirm gender equality and equity as prerequisites to sustainable development and ensure universal access to education, health care, and economic opportunity.

a. Secure the human rights of women and girls and end all violence against them.

b. Promote the active participation of women in all aspects of economic, political, civil, social, and cultural life as full and equal partners, decision makers, leaders, and beneficiaries.

c. Strengthen families and ensure the safety and loving nurture of all family members.

12. Uphold the right of all, without discrimination, to a natural and social environment supportive of human dignity, bodily health, and spiritual well-being, with special attention to the rights of indigenous peoples and minorities.

a. Eliminate discrimination in all its forms, such as that based on race, color, sex, sexual orientation, religion, language, and national, ethnic or social origin.

b. Affirm the right of indigenous peoples to their spirituality, knowledge, lands and resources and to their related practice of sustainable livelihoods.

c. Honor and support the young people of our communities, enabling them to fulfill their essential role in creating sustainable societies.

d. Protect and restore outstanding places of cultural and spiritual significance.

IV. DEMOCRACY, NONVIOLENCE, AND PEACE

13. Strengthen democratic institutions at all levels, and provide transparency and accountability in governance, inclusive participation in decision making, and access to justice.

a. Uphold the right of everyone to receive clear and timely information on environmental matters and all development plans and activities which are likely to affect them or in which they have an interest.

b. Support local, regional and global



civil society, and promote the meaningful participation of all interested individuals and organizations in decision making.

c. Protect the rights to freedom of opinion, expression, peaceful assembly, association, and dissent.

d. Institute effective and efficient access to administrative and independent judicial procedures, including remedies and redress for environmental harm and the threat of such harm.

e. Eliminate corruption in all public and private institutions.

f. Strengthen local communities, enabling them to care for their environments, and assign environmental responsibilities to the levels of government where they can be carried out most effectively.

14. Integrate into formal education and life-long learning the knowledge, values, and skills needed for a sustainable way of life.

a. Provide all, especially children and youth, with educational opportunities that empower them to contribute actively to sustainable development.

b. Promote the contribution of the arts and humanities as well as the sciences in sustainability education.

c. Enhance the role of the mass media in raising awareness of ecological and social challenges.

d. Recognize the importance of moral and spiritual education for sustainable living.

15. Treat all living beings with respect and consideration.

a. Prevent cruelty to animals kept in human societies and protect them from suffering.

b. Protect wild animals from methods of hunting, trapping, and fishing that cause extreme, prolonged, or avoidable suffering.

c. Avoid or eliminate to the full extent possible the taking or destruction of non-targeted species.

16. Promote a culture of tolerance, nonviolence, and peace.

a. Encourage and support mutual understanding, solidarity, and cooperation among all peoples and within and among nations.

b. Implement comprehensive strategies to prevent violent conflict and use collaborative problem solving to manage and resolve environmental conflicts and other disputes.

c. Demilitarize national security systems to the level of a non-provocative defense posture, and convert military resources to peaceful purposes, including ecological restoration.

d. Eliminate nuclear, biological, and toxic weapons and other weapons of mass destruction.

e. Ensure that the use of orbital and outer space supports environmental protection and peace.

f. Recognize that peace is the wholeness created by right relationships with oneself, other persons, other cultures, other life, Earth, and the larger whole of which all are a part.

THE WAY FORWARD

As never before in history, common destiny beckons us to seek a new beginning. Such renewal is the promise of these Earth Charter principles. To fulfill this promise, we must commit ourselves to adopt and promote the values and objectives of the Charter.

This requires a change of mind and heart. It requires a new sense of global interdependence and universal responsibility. We must imaginatively develop and apply the vision of a sustainable way of life locally, nationally, regionally, and globally. Our cultural diversity is a precious heritage and different cultures will find their own distinctive ways to realize the vision. We must deepen and expand the global dialogue that generated the Earth Charter, for we have much to learn from the ongoing collaborative search for truth and wisdom.

Life often involves tensions between important values. This can mean difficult choices. However, we must find ways to harmonize diversity with unity, the exercise of freedom with the common good, short-term objectives with long-term goals. Every individual, family, organization, and community has a vital role to play. The arts, sciences, religions, educational institutions, media, businesses, nongovernmental organizations, and governments are all called to offer creative leadership. The partnership of government, civil society, and business is essential for effective governance.

In order to build a sustainable global community, the nations of the world must renew their commitment to the United Nations, fulfill their obligations under existing international agreements, and support the implementation of Earth Charter principles with an international legally binding instrument on environment and development.

Let ours be a time remembered for the awakening of a new reverence for life, the firm resolve to achieve sustainability, the quickening of the struggle for justice and peace, and the joyful celebration of life.